

63003A1-1/53



Complete Directions for Use

EPA Reg. No. 524-537

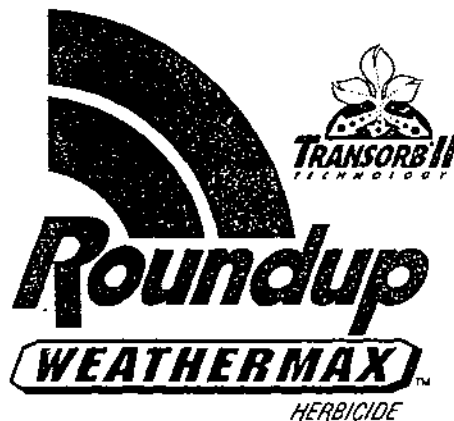
AVOID CONTACT OF HERBICIDE WITH FOLIAGE,
GREEN STEMS, EXPOSED NON-WOODY ROOTS OR
FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR
INDIVIDUAL ROUNDUP READY® CROPS).
DESIRABLE PLANTS AND TREES, BECAUSE SEVERE
INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup
Ready crops. Non-selective, broad-spectrum weed
control for many cropping systems, farmsteads
and Conservation Reserve Program acres.



63003A1-1/53



Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE,
GREEN STEMS, EXPOSED NON-WOODY ROOTS OR
FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR
INDIVIDUAL ROUNDUP READY® CROPS).
DESIRABLE PLANTS AND TREES, BECAUSE SEVERE
INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup
Ready crops. Non-selective, broad-spectrum weed
control for many cropping systems, farmsteads
and Conservation Reserve Program acres.

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Read the entire label before using this product.

Use only according to label instructions.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

CONTENTS

1	1.0	INGREDIENTS	5
2	2.0	IMPORTANT PHONE NUMBERS	5
3	3.0	PRECAUTIONARY STATEMENTS	6
	3.1	Hazards to Humans and Domestic Animals	6
	3.2	Environmental Hazards	8
	3.3	Physical or Chemical Hazards	8
4	4.0	STORAGE AND DISPOSAL	10
5	5.0	GENERAL INFORMATION (How This Product Works)	10
6	6.0	MIXING	13
	6.1	Mixing with Water	13
	6.2	Tank Mixing Procedure	14
	6.3	Mixing for Hand-Held Sprayers	15
	6.4	Ammonium Sulfate	15
	6.5	Colorants or Dyes	16
	6.6	Drift Control Additives	16

7	7.0	APPLICATION EQUIPMENT AND TECHNIQUES	16
	7.1	Aerial Equipment	17
	7.2	Ground Broadcast Equipment	21
	7.3	Hand-Held or High-Volume Equipment	21
	7.4	Selective Equipment	22
	7.5	Injection Systems	25
	7.6	CDA Equipment	25
8	8.0	ANNUAL AND PERENNIAL CROPS (Alphabetical)	26
	8.1	Cereal and Grain Crops	28
	8.2	Corn	30
	8.3	Cotton	33
	8.4	Fallow Systems	34
	8.5	Grain Sorghum (Milo)	36
	8.6	Herbs and Spices	39
	8.7	Oil Seed Crops	40
	8.8	Soybeans	41
	8.9	Sugarcane	43
	8.10	Vegetable Crops	45
	8.11	Miscellaneous Crops	49
9	9.0	TREE, VINE, AND SHRUB CROPS (Alphabetical)	51
	9.1	Berry Crops	56
	9.2	Citrus	58
	9.3	Miscellaneous Tree Food Crops	59
	9.4	Non-Food Tree Crops	59
	9.5	Pome Fruit	59
	9.6	Stone Fruit	60
	9.7	Tree Nuts	60
	9.8	Tropical and Subtropical Trees and Fruits	61
	9.9	Vine Crops	62

10	10.0 PASTURE GRASSES, FORAGE LEGUMES, AND RANGELANDS.....	63
	10.1 Alfalfa, Clover, and Other Forage Legumes	63
	10.2 Conservation Reserve Program (CRP)	65
	10.3 Grass Seed Production	66
	10.4 Pastures	68
	10.5 Rangelands	69
	10.6 Turf Grass Sod Production	70
11	11.0 ROUNDUP READY CROPS	70
	11.1 Canola with the Roundup Ready Gene	73
	11.2 Corn with the Roundup Ready Gene	75
	11.3 Cotton with the Roundup Ready Gene	78
	11.4 Soybeans with the Roundup Ready Gene	81
	11.5 Sugar Beets with the Roundup Ready Gene	84
12	12.0 NONCROP USES AROUND THE FARMSTEAD.....	85
	12.1 General Weed Control and Trim-And-Edge	85
	12.2 Greenhouse/Shadehouse	86
	12.3 Chemical Mowing	86
	12.4 Cut Stumps	87
	12.5 Habitat Management	88
13	13.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species).....	88
	13.1 Annual Weeds—Rates for 10 to 40 GPA	93
	13.2 Annual Weeds—Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K	93
	13.3 Annual Weeds—Hand-Held or High-Volume Equipment	94
	13.4 Annual Weeds—Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems	94
14	14.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species).....	95

15	15.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species).....	105
16	16.0 LIMIT OF WARRANTY AND LIABILITY	109

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt

OTHER INGREDIENTS:

100.0%

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,688,085 and 5,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 1-800-332-3111.

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000.

PRECAUTIONARY STATEMENTS 6**3.0 PRECAUTIONARY STATEMENTS****3.1 Hazards to Humans and Domestic Animals**

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

FIRST AID:	Call a poison control center or doctor for treatment advice.
IF IN EYES	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.
IF ON SKIN	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as Roundup WEATHERMAX™ herbicide, EPA Registration No. 524-537. You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.	

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

PRECAUTIONARY STATEMENTS 7

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks and chemical resistant gloves (EPA Chemical Resistance Category A), 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

See container label for STORAGE AND DISPOSAL instructions.

5.0 GENERAL INFORMATION (How this product works)

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when Roundup WEATHERMAX herbicide is the only pesticide used unless otherwise directed. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of this label for instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4

days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" for recommendations for specific weeds.

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds with disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds under poor growing conditions or that are heavily covered with dust.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germi-

nating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5.3 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

6.0 MIXING

Use the following conversion table to help determine application rates of Roundup WEATHERMAX herbicide based on commonly used rates of Roundup Original™ and Roundup UltraMAX™ herbicides.

NOW EVEN MORE CONCENTRATED Roundup WEATHERMAX CONVERSION TABLE		
Roundup WEATHERMAX (Ounces)	Roundup UltraMAX (Ounces)	Roundup Original (Ounces)
16	20	24
22	26	32
27	32	40
32	40	48

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or mini-

mize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle,

thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Desired Volume		Amount of Roundup WEATHERMAX					
		0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	1 oz	1.3 oz	2 oz	5 oz	9 oz	
25 gal	0.8 qt	0.7 qt	1 qt	1.5 qt	4 qt	7 qt	
100 gal	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal	

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank

mixed with certain residual herbicides, on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

6.5 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's recommendations.

6.6 Drift Control Additives

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial—Fixed Wing and Helicopter

Ground Broadcast Spray—Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment—Knapsack and backpack sprayers, pump-up pressure sprayers, hand-guns, handwands, mistblowers*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment—Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems—Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA)—Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 22 fluid ounces per acre. Refer to the individual use area sections of this label for recommended volumes, application rates, and further instructions.

FOR AERIAL APPLICATION IN CALIFORNIA OR SPECIFIC COUNTIES THEREIN, OR IN ARKANSAS, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATION.

APPLICATION EQUIPMENT 18

TIONS IN THAT STATE OR COUNTY FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

This product plus dicamba tank mixtures may not be applied by air in California.

Ensure uniform application—To avoid streaked, uneven or overlapped application, use appropriate marking devices.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the "Wind", "Temperature and Humidity", and "Temperature Inversions" sections of this label).

Controlling Droplet Size

- Volume: Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- Pressure: Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

- Number of nozzles: Use the minimum number of nozzles that provide uniform coverage.

- Nozzle orientation: Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

- Nozzle type: Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

- Boom length: For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

- Application height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 miles per hour due to variable wind direction and high inversion

APPLICATION EQUIPMENT 19

potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The product should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid direct application to any body of water.

Aircraft Maintenance

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

7.2 Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "ANNUAL WEEDS—HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of this product label.

7.4 Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on this label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Recirculating Spray System

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Shielded and Hooded Applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. A single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Spray volume should be 20-30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.
- Leave at least an 8-inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

Wiper Applicators

When applied under the conditions described in the following paragraphs, this product CONTROLS many weeds, including volunteer corn, Texas panicum, common eye, shattercane, sicklepod, spartanweed and bristly starbur. and SUPPRESSES many weeds including Florida beggarweed, Bermudagrass, hemp dogbane, dogfennel, guinea-grass, Johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, velvetleaf. Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to

ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions. Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator. Do not use wiper equipment when weeds are wet. Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water. Do not add surfactant to the herbicide solution. For Rope or Sponge Wick Applicators—Solutions ranging from 33 to 75 percent of this product in water may be used. Apply this solution to weeds listed above in this section. For Panel Applicators—Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

7.6 CDA Equipment

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast

equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1 quart per acre). For the control of perennial weeds, apply a 20 to 30 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 miles per hour (2 to 3 quarts per acre).

Controlled droplet application equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN SECTION 8 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label or separately published Monsanto Supplemental Labeling for instructions for treating Roundup Ready crops.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applicators in Row-Middles, and Post-Harvest treatments.

GENERAL USE INSTRUCTIONS:

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or pre-

emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" in this label. Repeat applications may be made up to a maximum of 5.3 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless otherwise specified in

this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

8.1 Cereal and Grain Crops

LABELED CROPS: Barley, Buckwheat, Millet (pearl, proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all types), Wild Rice.

PRECAUTIONS, RESTRICTIONS: Do not treat rice fields or levees when field contains water.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Wiper Applications Over-the-Top (Feed Barley and Wheat only), Preharvest (Feed Barley and Wheat only).

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

Red Rice Control Prior to Planting Rice

USE INSTRUCTIONS: Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red

rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

PRECAUTIONS, RESTRICTIONS: Avoid spraying during low humidity conditions, as reduced control may result. Do not treat rice fields or levees when the fields contain floodwater. Do not re-flood treated fields for 8 days following application.

Spot Treatment (except Rice)

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Wiper Applications Over-the-Top (Feed Barley and Wheat only)

USE INSTRUCTIONS: Wiper applications may be used in feed barley and wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, and when the rye is at least 6 inches above the wheat crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applicators.

Preharvest (Feed Barley and Wheat only)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. Stubble may be grazed immediately after harvest.

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.2 Corn

TYPES OF CORN: Field Corn, Seed Corn, Silage Corn, Sweet Corn and Popcorn.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest.

For Roundup Ready corn, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D	Frontier™/Outlook™
Aim™	FulTime™
Atrazine	Guardsman™/Leadoff™
Axiom™	Harness®
Balance™	Harness Xtra
Banvel™/Clarity™	Harness Xtra 5.6L
Bicep MAGNUM™	Lariat®
Bicep II MAGNUM™	Lasso®/Alachlor
Bullet®	Linex™/Lorox™
Degree™	Marksman™
Degree Xtra™	Micro-Tech®
Distinct™	Prowl™
Dual MAGNUM™	Python™
Dual II MAGNUM™	Simazine
Epic™	TopNotch™

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this recommendation includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS, RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fluid ounces of this product per acre for each application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 Cotton

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Selective Equipment, Spot Treatment, Preharvest.

For Roundup Ready cotton, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

Hooded Sprayer, Selective Equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to boll opening of cotton.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop

receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" sections of this label. For cotton regrowth inhibition, apply 11 to 44 fluid ounces of this product per acre.

Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank mixed with DEFTM 6, FolexTM, Ginstar, or PrepTM to provide additional enhancement of cotton leaf drop.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

8.4 Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Aid-to-Tillage.

Chemical Fallow

USE INSTRUCTIONS: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute

for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting. Do not apply dicamba tank mixtures by air in California.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba is applied within 45 days of planting.

Preplant Fallow Beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product will control weeds listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" sections of this label.

TANK MIXTURES: In addition, 8 fluid ounces of this product plus 2 to 3 fluid ounces of GoalTM 2XL per acre will control the following weeds with the maximum height or length indicated: 3 inches—common cheeseweed, chickweed, groundsel; 6 inches—London rocket, shepherd's-purse.

11 fluid ounces of this product plus 2 to 3 fluid ounces of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 6 inches—common cheeseweed, groundsel, maresail (*Conyza canadensis*), 12 inches—chickweed, London rocket, shepherd's-purse.

Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS, RESTRICTIONS: Tank mixtures with residual herbicides may result in reduced performance.

8.5 Grain Sorghum (Milo)

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications, Preharvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tank-mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

Atrazine	Lariat
Bicep II MAGNUM	Lasso
Bullet	Micro-Tech
Dual II MAGNUM	

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre

in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

Spot Treatment, Over-the-Top Wiper Applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this label.

PRECAUTIONS, RESTRICTIONS: For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

PRECAUTIONS, RESTRICTIONS: Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 22 fluid ounces of this product per acre per application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Preharvest

USE INSTRUCTIONS: Make applications at 30 percent grain moisture or less.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 Herbs and Spices

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Over-the-Top Wiper Applications (Peppermint and Spearmint only), Spot Treatments (Peppermint and Spearmint only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system.

Over-the-Top Wiper Applications, Spot Treatments (Peppermint and Spearmint only)

USE INSTRUCTIONS: This product may be used as a spot treatment or wiper application in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. In wiper applications, the applicator should be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10 percent of the total field area to be harvested should be treated at one time. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason. In wiper applications, contact of the herbicide solution with the crop may result in damage or destruction.

8.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowlark, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

For Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATIONS: Those listed in Section 8.0.

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops. Broadcast applications must be made prior to emergence of the listed oil seed crops. Wiper applicators or hooded sprayers may be used between the rows once the crop is established.

TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre on canola. Do not apply more than 22 fluid ounces of this product per acre for sunflowers as a single preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

8.8 Soybeans

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest, Selective Equipment.

For Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water per acre.

Aim™	Dual II MAGNUM
Amplify™	Firstate™
Assure II™	Flexstar™
Authority™	Frontier™/Outlook™
Boundary™	Fusion™
Canopy™	Gauntlet™
Canopy XL™	Lasso
Command™	Linex™
Command Xtra™	Lorox/Linuron
Domain™	Lorox Plus™
Dual MAGNUM	Micro-Tech

Prowl
Pursuit™
Pursuit Plus
Reflex™
Scepter™

Sencor™/Lexone™
Squadron™
Steel™
Valor™

This product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: Tank-mixtures with some of the above listed herbicides may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES".

This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 3.3 quarts per acre of this product for preharvest applications. Do not apply more than 44 fluid ounces per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

Selective Equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

8.9 Sugarcane

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus Spot Treatment.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.

PRECAUTIONS, RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

PRECAUTIONS, RESTRICTIONS: Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

Fallow Treatments

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 2.5 to 3.3 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Ground or aerial application equipment may be used. Applications up to 64 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of sugarcane. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

PRECAUTIONS, RESTRICTIONS: Do not allow treated weeds to come into contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

8.10 Vegetable Crops

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, and Post-Harvest, Directed Applications (non-bearing Ginseng), Over-the-Top Wipers (Rutabagas only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this

product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

8.10.1 Brassica Vegetables

LABELED CROPS: Broccoli, Chinese broccoli (gai lan), Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens.

8.10.2 Bulb Vegetables

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot.

8.10.3 Cucurbit Vegetables and Fruits

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Melons (all), *Momordica spp* (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ball melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon.

PRECAUTIONS, RESTRICTIONS: For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all), Muskmelon, Persian melon, Pumpkin, Squash (summer, winter), and Watermelon, allow at least 3 days between application and planting.

8.10.4 Leafy Vegetables

LABELED CROPS: Amaranth (Chinese spinach), Arugula (rocket), Beet greens, Cardoon, Celery, Chinese celery, Celtuce, Chaya, Chervil, Edible-leaved chrysanthemum, Garland chrysanthemum, Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Vine spinach, Swiss chard, Watercress (upland), Water spinach.

PRECAUTIONS, RESTRICTIONS: For Watercress, avoid applications within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.

8.10.5 Fruiting Vegetables

LABELED CROPS: Eggplant, Groundcherry (*Physalis spp.*), Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato.

PRECAUTIONS, RESTRICTIONS: For Eggplant, Groundcherry, Pepper (all), and Tomatillo, allow at least 3 days between application and planting. For Tomato, do not make hooded or shielded sprayer applications in row middles because of the potential for crop injury.

8.10.6 Legume Vegetables (succulent or dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeye pea, calijang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil, Pea (*Pisum*: includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean.

8.10.7 Root and Tuber Vegetables

LABELED CROPS: Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celeriac, Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Galangal, Ginger, Ginseng, Horseradish, Leren, Kava (turnip-rooted), Parsley (turnip-rooted), Parsnip, Potato, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Skirret, Sweet potato, Tanier, Turmeric, Turnip, Wasabi, Yacon, Yam bean, True yam.

Directed Applications (Non-bearing Ginseng only)

USE INSTRUCTIONS: This product may be used for general weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.

PRECAUTIONS, RESTRICTIONS: Direct applications so that there is no contact of this product with the ginseng plant. Applications must be made at least one year prior to harvest.

Over-the-Top Wiper Applications (Rutabagas only)

USE INSTRUCTIONS: Wiper applicators may be used over-the-top of rutabagas.

PRECAUTIONS, RESTRICTIONS: Allow at least 14 days between application and harvest of rutabagas.

8.11 Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: General Weed Control, Site Preparation, Spot Treatment (Asparagus).

For Roundup Ready sugar beets, see the "ROUNDUP READY CROPS" section of this label.

PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See

"APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

General Weed Control, Site Preparation

USE INSTRUCTIONS: This product may be applied for general weed control or for site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

Spot Treatment (Asparagus)

USE INSTRUCTIONS: This product may be applied immediately after cutting, but prior to the emergence of new spears.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

Post-Harvest (Asparagus)

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS, RESTRICTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select

and use recommended types of spray equipment for post-emergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

9.0 TREE, VINE, AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE, AND SHRUB CROPS WITHIN SECTION 9 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles (between rows of trees, vines or bushes), Strips (within rows of trees, vines or bushes), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, COA equipment, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

GENERAL USE INSTRUCTIONS: This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for general weed control or perennial grass suppression in established tree fruit and nut groves, orchards, berries, and vineyards. It may also be used for site preparation prior to planting or transplanting these crops. Apply 11 fluid ounces to 3.3 quarts per acre according to the "ANNUAL WEEDS" and "PERENNIAL WEEDS

RATE TABLES sections of this label. Utilize rates at the higher end of the recommended rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS: Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) should be used to minimize the potential for leakage or drift of herbicide sprays onto crop. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wipers or shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

Allow a minimum of 3 days between application and transplanting.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

TANK MIXTURES: A tank mixture of this product plus Goat 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goat 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goat 2XL will control common cheese-weed (malva) or hairy fleabane with a maximum height or diameter of 3 inches.

Strips (in rows)

TANK MIXTURES: This product may be applied in rows of tree or vine crops in tank mixtures with the following products:

Devrinol™ 50 DF
Direx™ 4L
Goat 2XL
Karmex™ DF
Krovar I
Prowl
Princep Caliber™ 90

Simazine 4L
Simazine 80W
Sim-Trol™ 4L
Solicam™ DF
Surflan™ AS
Surflan 75W

Do not apply these tank mixtures in Puerto Rico.

TREE AND VINE CROPS 54

Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial Grass Suppression

This product will suppress perennial grasses such as bahiagrass, Bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 22 to 44 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4 to 11 fluid ounces of this product per acre east of the Rocky Mountains

and 11 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4 to 7 fluid ounces of this product per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

Cut Stump

USE INSTRUCTIONS: Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor.

Fruit Trees: Apple, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Neclarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio, Walnut (black, English).

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

PRECAUTIONS, RESTRICTIONS: DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT

DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

9.1 Berry Crops

LABELLED CROPS: Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, Lucretiaberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Salal.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Spot Treatment in Cranberry Production and Post-Harvest Treatments in Cranberry Production.

PRECAUTIONS, RESTRICTIONS: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes, or foliage. Allow a minimum of 30 days between last application and harvest in cranberries. Allow a minimum of 14 days between last application and harvest in other berry crops. Do not make directed sprays within the cranberry bush areas prior to berry harvest.

Spot Treatment in Cranberry Production

USE INSTRUCTIONS: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be

used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 1.5 percent solution of this product. Spray to wet vegetation, not to run-off.

PRECAUTIONS, RESTRICTIONS: For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium- to large-sized droplets to minimize drift in order to avoid crop injury.

Post-Harvest Treatments in Cranberry Production

USE INSTRUCTIONS: Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.4 to 0.7 percent solution of this product. Spray to wet vegetation, not to run-off. If using hand-held boom sprayers, apply 44 to 86 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Make applications only after cranberries have been harvested. Do not treat more than 10 percent of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

9.2 Citrus

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (all), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tanger.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: (The recommendations below pertain to applications in Florida and Texas):

For burndown or control of the weeds listed below, apply the recommended rates of this product in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

For goatweed, apply 44 to 64 fluid ounces of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 44 fluid ounces per acre when plants are less than 8 inches tall and 64 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar™ I or Karmex™ may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial weeds:

S = Suppression
PC = Partial control

B = Burndown
C = Control

WEED SPECIES	Roundup WEATHERMAX RATE PER ACRE			
	0.7 QT	1.3 QT	2 QT	3.3 QT
Bermudagrass	B	—	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	—	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	—	PC	C

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in citrus crops. For citrus groves, apply as directed sprays only.

9.3 Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil).

TYPES OF APPLICATIONS: Those listed in Section 9.0.

9.4 Non-food Tree Crops

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other non-food tree crops.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

Directed Sprays, Spot Treatment, Wipers

USE INSTRUCTIONS: This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

PRECAUTIONS, RESTRICTIONS: Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. **THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.**

Site Preparation

USE INSTRUCTIONS: This product may be used prior to planting.

PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect nontarget plants during site preparation applications.

9.5 Pome Fruit

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince.

10.3 Grass Seed Production

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS"

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Shielded Sprayers, Wiper Applications, Spot Treatments, Creating Rows in Annual Ryegrass.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production. Applications must be made prior to the emergence of the crop to avoid crop injury. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.

PRECAUTIONS, RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

Do not feed or graze treated areas for 8 weeks following application.

Shielded Sprayers

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.

PRECAUTIONS, RESTRICTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications

PRECAUTIONS, RESTRICTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

Spot Treatments

USE INSTRUCTIONS: Use a 1 percent solution.

PRECAUTIONS, RESTRICTIONS: Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field area. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 11 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS, RESTRICTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray lines, or drift to contact the ryegrass.

grass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

Grower assumes all responsibility for crop losses from misapplication.

10.4 Pastures

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS", including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guinea grass, Kikuyugrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

TYPES OF APPLICATIONS: Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Application.

Preplant, Preemergence, Pasture Renovation

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Spot Treatment, Wiper Application

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total pasture area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

10.5 Rangelands

TYPES OF APPLICATIONS: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Postemergence

USE INSTRUCTIONS: Apply 8 to 11 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 11 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

PRECAUTIONS, RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product.

33

PASTURES AND RANGELANDS 70

Do not make more than one application per year.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

10.6 Turf Grass Sod Production

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Spot Treatment.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for seed or sod. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. For warm-season grasses such as Bermuda-grass, summer or fall applications provide the best control. Desirable turf grasses may be planted following the above procedures.

PRECAUTIONS, RESTRICTIONS: Do not feed or graze turf grass grown for seed or sod production for 8 weeks following application.

Spot Treatment

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Monsanto Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops

during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to crop varieties that are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain the Roundup Ready gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier or Monsanto representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready crop by applying glyphosate to the weeds and Roundup Ready crop are protected under several U.S. Patents, including 5,352,605 and 5,633,435. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing the Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing the Roundup Ready trait cannot be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

ROUNDUP READY CROPS 71

34

Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre as a preharvest treatment. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot Treatment or Wiper Applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applications" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover,

and other labeled forage legumes. Labeled crops may be planted into the treated area.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application. If application rates of 44 fluid ounces per acre or less are used wait 36 hours after application before grazing or harvesting. If application rates greater than 44 fluid ounces per acre are used, wait 8 weeks between applications and grazing or harvesting.

10.2 Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications.

Renovation (rotating out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.

Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

38

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in some crops.

9.6 Stone Fruit

LABELED CROPS: Apricot, Cherry (sweet, tart), Nectarine, Olive, Peach, Plum/Prune (all types), Plumcot.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

Restrictions on Application Equipment

For cherries, any application equipment listed in Section 9.0 may be used in all states.

Any application equipment listed in Section 9.0 may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states, use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

9.7 Tree Nuts

LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (black, English)

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconut.

9.8 Tropical and Subtropical Trees and Fruits

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Itama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Bananacide (banana only).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya, and plantain crops. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

Bananacide (Banana only)

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 0.5 fluid ounce (15 mL) of this product's concentrate per mat (or unit). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for general weed control.

9.9 Vine Crops

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: Applications should not be made when green shoots, canes or foliage are in the spray zone.

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest in vine crops. Do not use selective equipment in kiwi.

10.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

10.1 Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Preharvest (Alfalfa only), Spot Treatment or Wiper Applications (Alfalfa and Clover only), Renovation.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: If a single application is made at rates of 44 fluid ounces per acre or less, no waiting period between treatment and feeding or grazing is required. If applications rates greater than 44 fluid ounces per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For aerial applications, apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

For proper stewardship of aerial applications over-the-top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide "A Guide to On-Target Aerial Application" available by calling 1-800-ROUNDUP (1-800-768-6387) or on the internet at www.FARM-SOURCE.com.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

See the "MIXING" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise noted in this product label, supplemental labeling or fact sheets published separately by Monsanto.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 Canola with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY CANOLA MAY NOT BE PRACTICED

38

ROUNDUP READY CROPS 74

IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Preplant, At-planting, Preemergence applications	44 fluid ounces per acre
Total in-crop application from emergence to 6-leaf stage	22 fluid ounces per acre

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting canola.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Weeds Controlled: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

Single Application—Apply 11 to 16 fluid ounces per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and/or growth reduction. Similar injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

Sequential Application—Apply 11 fluid ounces per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as

Canada thistle and quackgrass or when controlling weeds with multiple application times.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 22 fluid ounces per acre. Allow a minimum of 60 days between last application and canola harvest.

11.2 Corn with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (in-crop), Spot Treatment, Preharvest, Post-Harvest.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	44 fluid ounces per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	22 fluid ounces per acre

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn.

ROUNDUP READY CROPS 75

ROUNDUP READY CROPS 76

TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

NOTE: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above.

Postemergence (in-crop)

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The postemergent application of 16 to 22 fluid ounces per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 16 to 22 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit[®] and atrazine at labeled rates. Refer to the speci-

fic product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

Tank-Mix Partner	Maximum Height of Corn For Application
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6 L	11 inches
Bullet* Micro-Tech*	5 inches
Permit	30 inches
atrazine	12 inches

*Bullet and Micro-Tech are not registered for use as a post-emergence application in Texas.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Single in-crop applications of this product are not to exceed 22 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 44 fluid ounces per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

Preharvest

USE INSTRUCTIONS: In Roundup Ready corn, up to 22 fluid ounces per acre of this product can be applied preharvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

ROUNDUP READY CROPS 77

ROUNDUP READY CROPS 78

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

11.3 Cotton with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Over-the-Top, Selective Equipment, Preharvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to layby	2.5 quarts per acre
Maximum preharvest application rate	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 4 quarts per acre. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN TWO

APPLICATIONS SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton.

Over-the-Top

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to 22 fluid ounces per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

Salvage Treatment. This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 22 fluid ounces per acre of this product may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.

NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

ROUNDUP READY CROPS 79

Selective Equipment

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fluid ounces per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Preharvest

USE INSTRUCTIONS: This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH

THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

11.4 Soybeans with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence, Preharvest, Post-Harvest.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from cracking throughout flowering	64 fluid ounces per acre
Maximum preharvest application rate	22 fluid ounces per acre

PRECAUTIONS/RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting soybeans.

Postemergence

USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate recommendations for specific annual weeds. In general, an initial application of 22 fluid ounces per acre on 2 to 8 inch tall weeds is recommended. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 44 fluid ounces per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

A 22- to 44-fluid-ounce per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP. To control giant ragweed, it is recommended that 22 fluid ounces per acre of this product be applied when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

PRECAUTIONS, RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering is 44 fluid ounces per acre.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans. Up to 22 fluid ounces per acre of this product can be applied by aerial or ground application.

PRECAUTIONS, RESTRICTIONS: Care should be taken to avoid excessive seed shatter loss due to ground application equipment. Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

11.5 Sugar Beets with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Emergence to 8-leaf stage	56 fluid ounces per acre
Between 8-leaf stage and canopy closure	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces per acre. Allow a minimum of 30 days between last application and sugar beet harvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready sugar beets.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergent over-the-top to Roundup Ready sugar beets from emergence to 30 days prior to harvest. To maximize yield potential spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. Refer to

the "ANNUAL WEEDS RATE TABLES" in this label for rate recommendations for specific annual weeds. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

12.0 NONCROP USES AROUND THE FARMSTEAD

TYPES OF APPLICATIONS: General Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stumps, Habitat Management.

12.1 General Weed Control and Trim-and-Edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

TANK MIXTURES: This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and 44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS—HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for recommended rates.

Arsenal	Plateau
Banvel/Clarity	Princep DF
Barricade™ 65WG	Princep Liquid
Diuron	Ronstar 50 WP
Endurance™	Sahara
Escort™	Simazine
Karmex OF	Surflan
Krovar I DF	Telar™
Oust™	Vanquish™
Pendulum 3.3 EC	2,4-D
Pendulum WDG	

This product plus dicamba tank mixtures may not be applied by air in California.

12.2 Greenhouse/ Shadehouse

This product may be used to control weeds in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

12.3 Chemical Mowing

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 11 fluid ounces of this product per acre when treating Bermuda-grass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

PRECAUTIONS, RESTRICTIONS: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 Cut Stumps

TYPES OF APPLICATION: Treating cut stumps in any non-crop site listed on this label

USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

Alder	Reed, giant
Eucalyptus	Saltcedar
Madrone	Sweetgum
Oak	Tan oak
Pepper, Brazilian	Willow
Pine, Austrian	

PRECAUTIONS, RESTRICTIONS: Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

12.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance, Wildlife Food Plots.

Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.

Wildlife Food Plots

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

13.0 ANNUAL WEEDS RATE TABLE

(Alphabetically by Species)

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE RECOMMENDED.

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 32 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

WEED SPECIES	RATE (fluid ounces per acre)				
	11	16	22	27	32
	Maximum height/length (in inches)				
Ammannia, purple	3	6	12	-	18
Annoda, spurred	-	2	3	5	8
Barley	18	18	-	-	-
Barnyardgrass	-	3	6	7	9
Bassia, fivehook	-	-	6	-	-
Beggarweed, Florida	-	5	8	-	-
Bittercress	12	20	-	-	-
Bluegrass, annual	10	-	-	-	-
Bluegrass, bulbous	6	-	-	-	-
Brome, downy ^{1,2}	6	12	-	-	-
Brome, Japanese	6	12	24	-	-
Browntop panicum	6	8	12	-	24
Buckwheat, wild ³	-	1	2	-	-
Burcucumber	-	6	12	-	18
Buttercup	12	20	-	-	-
Carolina geranium	-	-	4	-	9
Carpetweed	-	6	12	-	-
Cheat ²	6	20	-	-	-
Chervil	20	-	-	-	-
Chickweed	-	12	18	-	-
Cocklebur	12	18	24	-	36
Copperleaf, hophornbeam	-	2	4	-	6
Copperleaf, Virginia	-	2	4	-	6
Coreopsis, plains	-	6	12	-	18

ANNUAL WEEDS RATE TABLE 90

WEED SPECIES	RATE (fluid ounces per acre)				
	11	15	22	27	32
	Maximum height/length (in inches)				
Corn, volunteer	6	12	20	-	-
Corn speedwell	12	-	-	-	-
Crabgrass	3	6	12	-	-
Crowfootgrass	-	-	6	-	12
Cutleaf evening primrose	-	-	3	-	6
Devilsclaw (unicorn plant)	-	3	6	-	-
Dwarf dandelion	12	-	-	-	-
Eastern manna grass	8	12	-	-	-
Eclipta	4	8	12	-	-
Fall panicum	4	6	-	-	12
Falsedandelion	12	20	-	-	-
Falsellax, smallseed	12	-	-	-	-
Fiddleneck	-	6	12	-	-
Field pennycress	6	12	-	-	-
Flaree	-	-	6	-	12
Fleabane, annual	6	20	-	-	-
Fleabane, hairy (<i>Conyza bonariensis</i>)	-	-	6	-	10
Fleabane, rough	3	6	12	-	-
Florida pusley	-	-	4	-	6
Foxtail, giant, bristly, yellow	6	12	20	-	-
Foxtail, Carolina	10	-	-	-	-
Foxtail, green	12	-	-	-	-
Goatgrass, jointed	6	12	-	-	-
Goosegrass	-	3	6	-	12
Grain sorghum (milo)	6	12	20	-	-
Groundcherry	-	3	6	-	9
Groundsel, common	-	6	10	-	-
Hemp sesbania	-	2	4	6	8
Henbit	-	-	6	-	12
Horseweed/ Mare's tail (<i>Coryza canadensis</i>)	-	6	12	-	18

Itchgrass	6	8	12	-	18
Jimsonweed	-	-	12	-	18
Johnsongrass, seedling	6	12	18	-	24
Junglerice	-	3	6	7	9
Knotweed	-	-	6	-	12
Kochia	-	3 to 6	12	-	-
Lambsquarters	-	6	12	-	20
Little barley	6	12	-	-	-
London rocket	6	-	24	-	-
Mayweed	-	2	6	12	18
Morningglory, annual (<i>Ipomoea spp</i>)	-	-	3	-	6
Mustard, blue	6	12	18	-	-
Mustard, lanky	6	12	18	-	-
Mustard, tumble	6	12	18	-	-
Mustard, wild	6	12	18	-	-
Nightshade, black	-	4	6	-	12
Nightshade, hairy	-	4	6	-	12
Oats	3	6	18	-	-
Pigweed species	-	12	18	24	-
Prickly lettuce	-	6	12	-	-
Purslane	-	-	3	-	6
Ragweed, common	-	6	12	-	18
Ragweed, giant	-	6	12	-	18
Red rice	-	-	4	-	-
Rye, volunteer/cereal ²	6	18	18+	-	-
Ryegrass	-	-	6	-	12
Sandbur, field	6	12	-	-	-
Sandbur, longspine	6	12	-	-	-
Shattercane	6	12	20	-	-
Shepherd's-purse	6	12	-	-	-
Sicklepod	-	2	4	-	8
Signalgrass, broadleaf	-	3	6	7	9
Smartweed, ladythumb	-	-	6	-	9
Smartweed, Pennsylvania	-	-	6	-	9
Sowthistle, annual	-	-	6	-	12

ANNUAL WEEDS RATE TABLE 91

ANNUAL WEEDS RATE TABLE 92

WEED SPECIES	RATE (fluid ounces per acre)				
	11	16	22	27	32
	Maximum height/length (in inches)				

Spanishneedles			6		12
Speedwell, purslane	12				
Sprangletop	6	12	20		
Spurge, prostrate		6	12		
Spurge, spotted		6	12		
Spurry, umbrell	6				
Sunkgrass		12			
Sunflower	12				
Swinecress		5	12		
Tea weed, prickly sida					6
Texas panicum	6	8	12		24
Thistle, Russian	6		12		
Velvetleaf			6		12
Virginia pepperweed		18			
Waterhemp			6		12
Wheat	6	12	18		
Wheat (overwintered)		6	12		18
Wild oats	3	6	18		
Wild proso millet		6	12		18
Witchgrass			12		
Woolly cupgrass		6	12		
Yellow rocket			12	20	

¹ For control of downy brome in no-till systems, use 16 fluid ounces per acre.

² Performance is better if application is made before this weed reaches the boot stage of growth.

³ Use 16 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fluid ounces followed by 22 fluid ounces of this product per acre.

⁴ Do not treat kochia in the button stage.

⁵ Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

13.1 Annual Weeds—Rates for 10 to 40 Gallons per Acre

Apply 22 to 44 fluid ounces of this product per acre. Use 22 fluid ounces per acre if weeds are less than 6 inches tall, 32 fluid ounces per acre if weeds are 6 to 12 inches tall and 44 fluid ounces per acre if weeds are greater than 12 inches tall. These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

13.2 Annual Weeds—Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K

8 to 11 fluid ounces of this product plus 0.25 pound of dicamba or 0.5 pound of 2,4-D or 1 to 2 fluid ounces of Tordon 22K per acre will control the following weeds with the maximum height or length indicated: 6 inches—prickly lettuce, marestail/horseweed, morningglory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12 inches—cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

11 fluid ounces of this product plus 0.5 pound of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

ANNUAL WEEDS RATE TABLE 93

ANNUAL WEEDS RATE TABLE 94

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

13.3 Annual Weeds—Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7 percent solution.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 4 percent solution for annual and perennial weeds and a 4 to 7 percent solution for woody brush and trees.

13.4 Annual Weeds—Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

16 to 20 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fluid ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 0.125 pound of dicamba for control).

14.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)

Apply to actively growing perennial weeds.

NOTE: If weeds have been mowed or killed, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

Alfalfa	1-1.5	3-10	1-1.5%
---------	-------	------	--------

Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Alligatorweed	3-3	3-20	1%
---------------	-----	------	----

For partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.

Anise (fennel)	—	—	1-1.5%
----------------	---	---	--------

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Bahiagrass	2-3.3	3-20	1.5%
------------	-------	------	------

Apply when most plants have reached the early head stage.

Bentgrass	1	10-20	1.5%
-----------	---	-------	------

For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.

PERENNIAL WEEDS RATE TABLE 95

PERENNIAL WEEDS RATE TABLE 96

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Mix % Solution
--------------	-------------	--------------------	---------------------

Bermudagrass 2-3.3 3-20 1.5%

For control, apply 3.3 quarts of this product per acre. For partial control, apply 64 fluid ounces per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.

Bermudagrass, water (knotgrass) 0.7-1 5-10 1.5%

Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only: Apply 22 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermudagrass that is 12 to 18 inches in length.

This product is not registered in California for use on water Bermudagrass.

Bindweed, field 0.4-3.3 3-20 1.5%

Do not treat field bindweed under drought stress as good soil moisture is necessary for active growth.

For control, apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Also for control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba in 10 to 20 gallons of water per acre. Do not apply by air.

For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product plus 1.0 pound of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applica-

tions. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 22 fluid ounces to 3.3 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky 0.7-1.5 3-40 1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Blueweed, Texas 2-3.3 3-40 1.5%

Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Brackenfern 2-3 3-40 1%

Apply to fully expanded fronds that are at least 18 inches long.

Bromegrass, smooth 0.7-1.5 3-40 1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly-leaf — 3-20 1.5%

For control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba per acre. For partial control, apply 22 fluid ounces of this product plus 0.5 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

PERENNIAL WEEDS RATE TABLE 97

PERENNIAL WEEDS RATE TABLE 96

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
Canarygrass, reed	1.5-2	3-40	1.5%
For best results, apply when most plants have reached the boot-to-head stage of growth.			
Cattail	2-3.3	3-40	1.5%
Apply when most plants have reached the early head stage.			
Clover, red, white	2-3.3	3-20	1.5%
Apply when most plants have reached the early bud stage.			
Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.			
Cogongrass	2-3.3	3-40	1.5%
Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.			
Dallisgrass	2-3.3	3-20	1.5%
Apply when most plants have reached the early head stage.			
Dandelion	2-3.3	3-40	1.5%
Apply when most plants have reached the early bud stage of growth.			
Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre.			
Dock, curly	2-3.3	3-40	1.5%
Apply when most plants have reached the early bud stage of growth.			
Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1.0 pound of 2,4-D in 3 to 10 gallons of water per acre.			
Dogbane, hemp	2-3.3	3-40	1.5%
Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.			
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.			
Fescue (except tall)	2-3.3	3-20	1.5%
Apply when most plants have reached the early head stage.			
Fescue, tall	2-3.3	3-40	1.5%
Apply 64 fluid ounces of this product per acre when most plants have reached boot-to-early seedhead stage of development.			
Fall applications only. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 11 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.			
Guineagrass	1.5-2	3-40	1.5%
Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.			
In Texas and ridge of Florida, use 44 fluid ounces for control. In the flatwoods region of Florida, 64 fluid ounces is required for control.			
Horsenettle	2-3.3	3-20	1.5%
Apply when most plants have reached the early bud stage.			
Horseradish	2-3.3	3-40	1.5%
Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.			
Iceplant	2-3.3	3-20	1.5%
Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.			
Jerusalem artichoke	2-3.3	3-20	1.5%
Apply when most plants are in the early bud stage.			
Johnsongrass	0.4-2	3-40	1%
In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.			
For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 22 fluid ounces of this product per acre.			

PERENNIAL WEEDS RATE TABLE 99

PERENNIAL WEEDS RATE TABLE 100

Weed Species	Rate (Q/A)	Water Volume (GPA)	Hand-Mix Solution
--------------	------------	--------------------	-------------------

For burndown of Johnsongrass, apply 11 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)—Apply a 0.7 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass	1.5-2	3-40	1.5%
-------------	-------	------	------

Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

Knapweed	3	3-40	1.5%
----------	---	------	------

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana	3	3-40	1.5%
---------	---	------	------

Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Lespedeza	2-3.3	3-20	1.5%
-----------	-------	------	------

Apply when most plants have reached the early bud stage.

Milkweed, common	2	3-40	1.5%
------------------	---	------	------

Apply when most plants have reached the late bud to flower stage of growth.

Muhly, wirestem	0.7-1.5	3-40	1.5%
-----------------	---------	------	------

Use 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or non-crop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

Mullein, common	2-3.3	3-20	1.5%
-----------------	-------	------	------

Apply when most plants are in the early bud stage.

Napiergrass	2-3.3	3-20	1.5%
-------------	-------	------	------

Apply when most plants are in the early head stage.

Nightshade, silverleaf	1.5	3-10	1.5%
------------------------	-----	------	------

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge, purple or yellow	0.4-2	3-40	1-1.5%
----------------------------	-------	------	--------

Apply 64 fluid ounces of this product per acre or apply a 1 to 1.5 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 11 to 44 fluid ounces of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

Orchardgrass	0.7-1.5	3-40	1.5%
--------------	---------	------	------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Orchardgrass sods going to no-till corn: Apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

PERENNIAL WEEDS RATE TABLE 101

PERENNIAL WEEDS RATE TABLE 102

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand Held % Solution
--------------	-------------	--------------------	----------------------

Pampasgrass — — 1-1.5%

Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass 2-3.3 3-20 1.5%

Apply when most plants are in the early head stage.

Phragmites 2-3.3 10-40 1-1.5%

For partial control and best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock — — 1-1.5%

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Thorough coverage is necessary for best control.

Pokeweed common 1 3-40 1.5%

Apply to actively growing plants up to 24 inches tall.

Quackgrass 0.7-2 3-40 1.5%

In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

Redvine 0.5-1.5 5-10 1.5%

For suppression, apply 16 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 44 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed giant 1 1-1.5%

Best results are obtained when applications are made in late summer to fall.

Ryegrass, perennial 0.7-2 3-40 1%

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 1 quart of this product per acre.

Smartweed swamp 2-3.3 3-40 1.5%

Apply when most plants have reached the early bud stage of growth. Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.

Sowthistle, perennial 1.5-2 3-40 1.5%

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

Spurge, leafy — 3-10 1.5%

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

PERENNIAL WEEDS RATE TABLE 103

PERENNIAL WEEDS RATE TABLE 104

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand Held Solution
--------------	-------------	--------------------	--------------------

Starthistle, yellow 1.5 10-40 1.5%

Best results are obtained when applications are made during the rosette, bolting and early flower stages.

Sweet potato, wild — — 1.5%

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke — — 1.5%

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, Canada 1.5-2 3-40 1.5%

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

Timothy 1.5-2 3-40 1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

Torpedograss 2.5-3.3 3-40 1.5%

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Trumpet creeper 1.5 5-10 1.5%

For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week

before a killing frost.

Vaseygrass 2-3.3 3-20 1.5%

Apply when most plants are in the early head stage.

Velvetgrass 2-3.3 3-20 1.5%

Apply when most plants are in the early head stage.

Wheatgrass, western 1.5-2 3-40 1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

15.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species)

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3-40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

WOODY BRUSH AND TREES 106

Wood Species Rate Concentration Comments
(QVA) (GAL) (GAL)

PC=Partial Control; C=Control

Alder	2-3	1%	C
Ash	1.5-3.3	1-1.5%	PC
Aspen, quaking	1.5-2	1%	C
Bearmat (Bearclover)	1.5-3.3	1-1.5%	PC
Beech	1.5-3.3	1-1.5%	PC
Birch	1.5-2	1%	C
Blackberry	2-3	1%	C
Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7 percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 to 2.5 quarts of this product in 10 to 40 gallons of water per acre.			
Blackgum	1.5-3.3	1-1.5%	C
Bracken	1.5-3.3	1-1.5%	C
Broom;			
French, Scotch	—	1-1.5%	C
Buckwheat,			
California	—	1-1.5%	PC
Thorough coverage of foliage is necessary for best results.			
Cascara	1.5-3.3	1-1.5%	PC
Catsclaw	—	1%	PC
Ceanothus	1.5-3.3	1-1.5%	PC
Chamise	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Cherry, bitter			
black, pin	1.5-2	1%	C

Coyote brush — 1-1.5% C

Apply when at least 50 percent of the new leaves are fully developed.

Dogwood	1.5-3.3	1-1.5%	PC
Elderberry	1.5-2	1%	C
Elm	1.5-3.3	1-1.5%	PC
Eucalyptus	—	1.5%	C

For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed eucalyptus plants.

Florida holly (Brazilian)			
Peppertree	1.5-3.3	1-1.5%	PC
Gorse	1.5-3.3	1-1.5%	PC
Hasardia	1.5-3.3	1-1.5%	PC

Thorough coverage of foliage is necessary for best results.

Hawthorn	1.5-2	1%	C
Hazel	1.5-2	1%	C
Hickory	1.5-3.3	1-1.5%	PC
Honeysuckle	2-3	1%	C

Hornbeam, American	1.5-3.3	1-1.5%	PC
Kudzu	2.5-3.3	1.5%	C

Repeat applications may be required to maintain control.

Locust, black	1.5-3	1-1.5%	PC
Madrone resprouts	—	1.5%	PC

Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Manzanita	1.5-3.3	1-1.5%	PC
Maple, red	1.5-3	1%	C

Apply a 1 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.

WOODY BRUSH AND TREES 107

WOODY BRUSH AND TREES 108

Weed Species	Rate (QT/A)	Hand-Held 1% Solution	Comments
PC=Partial Control; C=Control			
Maple, sugar	—	1%	C
Apply when at least 50 percent of the new leaves are fully developed.			
Monkey flower	—	1-1.5%	PC
Thorough coverage of foliage is necessary for best results.			
Oak, black, white	1.5-3.3	1-1.5%	PC
Oak, post	2-3	1%	C
Oak, northern	—	1%	C
Apply when at least 50 percent of the new pin leaves are fully developed.			
Oak, southern, red	1.5-2.3	1%	C
Persimmon	1.5-3.3	1-1.5%	PC
Pine	1.5-3.3	1-1.5%	C
Poison ivy/			
Poison oak	2.5-3.3	1.5%	C
Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.			
Poplar, yellow	1.5-3.3	1-1.5%	PC
Redbud, eastern	1.5-3.3	1-1.5%	C
Rose, multiflora	1.5	1%	C
Treatments should be made prior to leaf deterioration by leaf-eating insects.			
Russian olive	1.5-3.3	1-1.5%	PC
Sage, black	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Sage, white	1.5-3.3	1-1.5%	PC
Sage brush,			
California	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Salmonberry	1.5-2.3	1%	C

Saltcedar	1.5-3.3	1-1.5%	C
Sassafras	1.5-3.3	1-1.5%	PC
Sourwood	1.5-3.3	1-1.5%	PC
Sumac, poison	—	—	—
Smooth-winged	1.5-3.3	1-1.5%	PC
Sweetgum	1.5-2	1%	C
Swordfern	1.5-3.3	1-1.5%	PC
Tallowtree, Chinese	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Tan oak resprouts	—	1.5%	PC
Apply to resprouts that are less than 3 to 5 feet tall. Best results are obtained with fall applications.			
Thimbleberry	1.5-2.3	1%	C
Tobacco, tree	—	1-1.5%	PC
Trumpet creeper	1.5-2.3	1%	C
Vine maple	1.5-3.3	1-1.5%	PC
Virginia creeper	1.5-3.3	1-1.5%	C
Waxmyrtle, southern	1.5-3.3	1-1.5%	PC
Willow	2-3	1%	C

16.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

WOODY BRUSH AND TREES 110

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL

THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Amplify, Bullet, Degree, Degree Xtra, Farmsource, Harness, Lariat, Lasso, Micro-Tech, Monsanto and the Vine symbol, Permit, Roundup Original, Roundup Ready, Roundup UltraMAX, Roundup WEATHERMAX and Transorb are trademarks of Monsanto Technology LLC.

Assure, Authority, Canopy, Escort, Krovar, Leadoff, Lexone, Oust and Telar are trademarks of E.I. duPont de Nemours & Co. Inc.

Direx, Karmex, Linex and Lorox are trademarks of Griffin LLC.

Barricade, Bicep MAGNUM, Boundary, Dual MAGNUM, Endurance, Flexstar, Fusion, Princep Caliber, Reflex, Solicam and Vanquish are trademarks of Syngenta CropProtection Inc.

Firstate, Fulltime, Python, Surflan, TopNotch and Tordon are trademarks of Dow AgroSciences LLC.

Arsenal, Banvel, Clarity, Distinct, Frontier, Guardsman, Marksman, Outlook, Pendulum, Plateau, Prowl, Pursuit, Pursuit Plus, Sahara, Scepter, Squadron and Steel are trademarks of BASF Corp.

Balance, Follex, Ginstar, Prep, and Ronstar are trademarks of Aventis CropSciences.

Goal is a trademark of Rohm and Haas Company.

Axiom, DEF, Domain, Epic and Sencor are trademarks of Bayer Crop Protection.

Aim, Command and Gauntlet are trademarks of FMC Corporation.

Devrinol is a trademark of United Phosphorus Inc.

Sim-Trol is a trademark of Sipcam Agro USA, Inc.

Valor is a trademark of Valeri USA Corporation.

LIMIT OF WARRANTY 111

This product is protected by U.S. Patent Nos.
5,688,085 and 6,365,551. Other patents pending.
No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-537

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

MONSANTO



©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167 USA

63003A1-1/53



Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS). DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many cropping systems, farmsteads and Conservation Reserve Program acres.

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

March 6, 2003

Office of Pesticide Programs (7504C)
Document Processing Center (NOTIF)
U.S. Environmental Protection Agency
Crystal Mall #2, Room 266A
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: Roundup WeatherMAX Herbicide (EPA Reg. No. ~~524-537~~)
Submission of Final Printed Supplemental Label for
Control and Management of Glyphosate Resistant Horseweed
(Marestail, *Conyza Canadensis*) in Cotton, Corn, and Soybeans

Dear Mr. Tompkins:

Monsanto is submitting for your files, five (5) copies of the final printed supplemental label for Roundup WeatherMAX Herbicide (EPA Reg. No. 524-537, Print Plate No. 63003B1-21/53) approved by the EPA on February 6, 2003.

EPA approved use of this label for use across the US, but Monsanto has chosen to implement it only in a limited geography as stated on the label because this is where the glyphosate resistant weed population has been found.

"This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA."

If you have any questions regarding this submission, please feel free to contact me through Dr. Marsha Gray or directly at 314-694-9036.

Sincerely,

Debra Hinton
Registration Specialist

cc: M. Gray
S. Wratten



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

295599

Application for Pesticide - Section I

1. Company/Product Number Monsanto / 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Roundup WeatherMAX Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(ii), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated <u>2/6/2003</u>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Print Plate No. 63003B1-21/53

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. _____ No. per container _____	If "Yes" Package wgt _____ No. per container _____
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____	

Section - IV

Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dr. Marsha Gray	Title Registration Manager	Telephone No. (Include Area Code) (202) 763-2460
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		8. Date Application Received (Stamped) <div style="text-align: right; font-size: 2em;">61</div>
Signature 	3. Title Registration Specialist	
Typed Name Debra Hinton	5. Date 3/6/03	

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS.

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, end use reregistration, amendment, resubmission, to application for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

62

Supplemental Labeling

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container for each product and on this supplemental labeling.



EPA Reg. No. 524-537

FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (*MARETAIL*, *Conyza canadensis*) IN COTTON, CORN, AND SOYBEANS IN THE FOLLOWING GEOGRAPHIES:

- All counties in the states of Delaware, Kentucky and New Jersey.
- All counties South of Interstate 70 in the states of Indiana and Ohio.
- All counties West of State Highway 13 in the state of Tennessee.
- Maryland counties of Caroline, Cecil, Dorchester, Kent, Queen Annes, Somerset, Talbot, Wicomico and Worcester.
- Missouri counties of Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Scott and Stoddard.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This label must be in the possession of the user at the time of herbicide application. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS).

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup WeatherMAX herbicide for essential product performance information.

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

Cotton:

Preplant:

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity® (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

Post-directed (Roundup Ready® Cotton varieties only):

Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and post emergence-over-the-top and/or directed applications of Roundup WeatherMAX herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

Soybeans:

Preplant:

Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas

where 2,4-D cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer and Monsanto representative.

In-crop (Roundup Ready Soybean varieties only):

It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop Roundup Ready soybeans, apply a tank mixture of this product (22 fluid ounces per acre) with Amplify™ (0.3 ounces per acre). This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6 inches in height.

Corn:

Preplant, At-Planting, Preemergence:

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds a.i. of per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank-mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

In-crop (Roundup Ready Corn hybrids only):

In-crop Roundup Ready corn, apply a tank-mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

ATTENTION:

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Amplify, Roundup WeatherMAX, Roundup Ready, and Transorb II are registered trademarks of Monsanto Technology LLC.

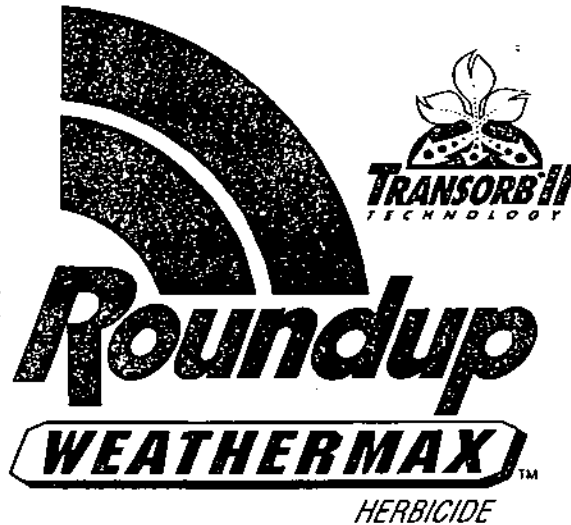
Clarity is a trademark of BASF Corp.

6300381-21/53
2/6/2003

Supplemental Labeling

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container for each product and on this supplemental labeling.



EPA Reg. No. 524-537

FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (*MARETAIL*, *Conyza canadensis*) IN COTTON, CORN, AND SOYBEANS IN THE FOLLOWING GEOGRAPHIES:

- All counties in the states of Delaware, Kentucky and New Jersey.
- All counties South of Interstate 70 in the states of Indiana and Ohio.
- All counties West of State Highway 13 in the state of Tennessee.
- Maryland counties of Caroline, Cecil, Dorchester, Kent, Queen Annes, Somerset, Talbot, Wicomico and Worcester.
- Missouri counties of Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Scott and Stoddard.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This label must be in the possession of the user at the time of herbicide application. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS).

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup WeatherMAX herbicide for essential product performance information.

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

Cotton:

Preplant:

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity® (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

Post-directed (Roundup Ready® Cotton varieties only):

Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and post emergence over-the-top and/or directed applications of Roundup WeatherMAX herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

Soybeans:

Preplant:

Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas

where 2,4-D cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer and Monsanto representative.

In-crop (Roundup Ready Soybean varieties only):

It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop Roundup Ready soybeans, apply a tank mixture of this product (22 fluid ounces per acre) with Amplify™ (0.3 ounces per acre). This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6 inches in height.

Corn:

Preplant, At-Planting, Preemergence:

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds a.i. of per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank-mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

In-crop (Roundup Ready Corn hybrids only):

In-crop Roundup Ready corn, apply a tank-mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

ATTENTION:

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Amplify, Roundup WeatherMAX, Roundup Ready, and Transorb II are registered trademarks of Monsanto Technology LLC.

Clarity is a trademark of BASF Corp.

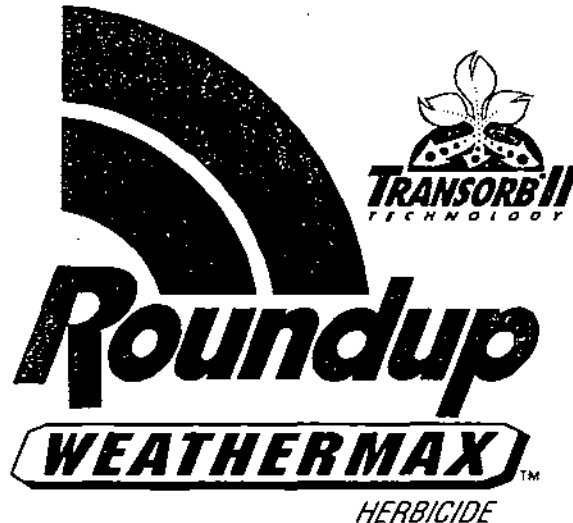
63003B1-21/53

2/6/2003

Supplemental Labeling

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container for each product and on this supplemental labeling.



EPA Reg. No. 524-537

FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (MARESTAIL, *Conyza canadensis*) IN COTTON, CORN, AND SOYBEANS IN THE FOLLOWING GEOGRAPHIES:

- All counties in the states of Delaware, Kentucky and New Jersey.
- All counties South of Interstate 70 in the states of Indiana and Ohio.
- All counties West of State Highway 13 in the state of Tennessee.
- Maryland counties of Caroline, Cecil, Dorchester, Kent, Queen Annes, Somerset, Talbot, Wicomico and Worcester.
- Missouri counties of Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Scott and Stoddard.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This label must be in the possession of the user at the time of herbicide application. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS).

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup WeatherMAX herbicide for essential product performance information.

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

Cotton:

Preplant:

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity® (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

Post-directed (Roundup Ready® Cotton varieties only):

Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and post emergent over-the-top and/or directed applications of Roundup WeatherMAX herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

Soybeans:

Preplant:

Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas

where 2,4-D cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer and Monsanto representative.

In-crop (Roundup Ready Soybean varieties only):

It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop Roundup Ready soybeans, apply a tank mixture of this product (22 fluid ounces per acre) with Amplify™ (0.3 ounces per acre). This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6 inches in height.

Corn:

Preplant, At-Planting, Preemergence:

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds a.i. of per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank-mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

In-crop (Roundup Ready Corn hybrids only):

In-crop Roundup Ready corn, apply a tank-mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

ATTENTION:

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Amplify, Roundup WeatherMAX, Roundup Ready, and Transorb II are registered trademarks of Monsanto Technology LLC.

Clarity is a trademark of BASF Corp.

6300381-21/53
2/6/2003

68

Supplemental Labeling

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container for each product and on this supplemental labeling.



EPA Reg. No. 524-537

FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (MARESTAIL, *Conyza canadensis*) IN COTTON, CORN, AND SOYBEANS IN THE FOLLOWING GEOGRAPHIES:

- All counties in the states of Delaware, Kentucky and New Jersey.
- All counties South of Interstate 70 in the states of Indiana and Ohio.
- All counties West of State Highway 13 in the state of Tennessee.
- Maryland counties of Caroline, Cecil, Dorchester, Kent, Queen Annes, Somerset, Talbot, Wicomico and Worcester.
- Missouri counties of Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Scott and Stoddard.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night (314) 694-4000.

68

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This label must be in the possession of the user at the time of herbicide application. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS).

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup WeatherMAX herbicide for essential product performance information.

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

Cotton:

Preplant:

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity® (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

Post-directed (Roundup Ready® Cotton varieties only):

Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and post emergent over-the-top and/or directed applications of Roundup WeatherMAX herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

Soybeans:

Preplant:

Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas

where 2,4-D cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer and Monsanto representative.

In-crop (Roundup Ready Soybean varieties only):

It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop Roundup Ready soybeans, apply a tank mixture of this product (22 fluid ounces per acre) with Amplify™ (0.3 ounces per acre). This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6 inches in height.

Corn:

Preplant, At-Planting, Preemergence:

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds a.i. of per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank-mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

In-crop (Roundup Ready Corn hybrids only):

In-crop Roundup Ready corn, apply a tank-mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

ATTENTION:

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Amplify, Roundup WeatherMAX, Roundup Ready, and Transorb II are registered trademarks of Monsanto Technology LLC.

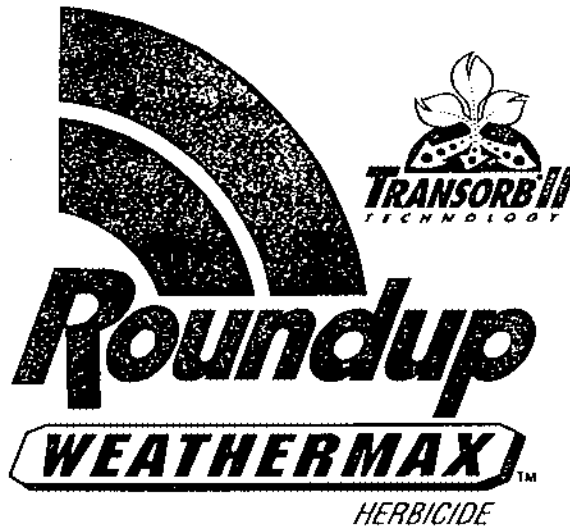
Clarity is a trademark of BASF Corp.

6300381-21/53
2/6/2003

Supplemental Labeling

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container for each product and on this supplemental labeling.



EPA Reg. No. 524-537

FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED (MARETAIL, *Conyza canadensis*) IN COTTON, CORN, AND SOYBEANS IN THE FOLLOWING GEOGRAPHIES:

- All counties in the states of Delaware, Kentucky and New Jersey.
- All counties South of Interstate 70 in the states of Indiana and Ohio.
- All counties West of State Highway 13 in the state of Tennessee.
- Maryland counties of Caroline, Cecil, Dorchester, Kent, Queen Annes, Somerset, Talbot, Wicomico and Worcester.
- Missouri counties of Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Scott and Stoddard.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This label must be in the possession of the user at the time of herbicide application. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS).

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup WeatherMAX herbicide for essential product performance information.

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

Cotton:

Preplant:

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity® (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.

Post-directed (Roundup Ready® Cotton varieties only):

Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and post emergence over-the-top and/or directed applications of Roundup WeatherMAX herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

Soybeans:

Preplant:

Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas

where 2,4-D cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer and Monsanto representative.

In-crop (Roundup Ready Soybean varieties only):

It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop Roundup Ready soybeans, apply a tank mixture of this product (22 fluid ounces per acre) with Amplify™ (0.3 ounces per acre). This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50 percent flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6 inches in height.

Corn:

Preplant, At-Planting, Preemergence:

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank-mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

In-crop (Roundup Ready Corn hybrids only):

In-crop Roundup Ready corn, apply a tank-mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

ATTENTION:

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Amplify, Roundup WeatherMAX, Roundup Ready, and Transorb II are registered trademarks of Monsanto Technology LLC.

Clarity is a trademark of BASF Corp.

6300381-21/53
2/5/2003

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

March 6, 2003

Document Processing Center (NOTIF)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: Roundup WeatherMAX® Herbicide (EPA Reg. No. ~~524-537~~)
Final Printed Labeling
Roundup Ready® Soybean Uses in California

Dear Mr. Tompkins:

Roundup WeatherMAX Herbicide is a recently introduced brand of potassium glyphosate that was registered by the Agency on 11-April-2002. In the Final Printed Label booklets (forwarded to EPA on 3-Jun-2002 and 11-Nov-2002) Section 11.4 includes a statement specifying that this product may only be used in California on Roundup Ready soybeans in conjunction with a CA-approved supplemental label specifying use directions. This element of the label was designed from the beginning to provide a means for California to approve this soybean use pattern on a timing that was independent from the rest of the labeled instructions.

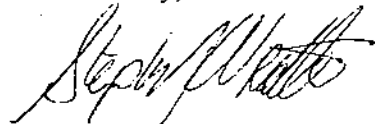
That California approval has now occurred, and I attach for your records five (5) examples of Final Printed Labeling that will be used in California. Although US EPA has not explicitly approved this precise text in a draft form ahead of time, CDPR has done so. Monsanto is confident that the Agency will accept it because it only says, in effect, to follow the published label directions. Therefore, as such, it does not constitute any change in the terms of the registration. At the next printing of this booklet, Monsanto will delete the statement in Section 11.4 that references this supplemental label and make this present supplemental label obsolete.

13

This notification of a California specific supplemental label is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR§ 152.46, and no other changes (beside those outlined herein) have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statements to the EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement actions and penalties under sections 12 and 14 of FIFRA.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

WeatherMAX CA soybean FPL.doc



United States
Environmental Protection Agency
Washington, DC 20460

☐
☐
☒

Registration
Amendment
Other

OPP Identifier Number

295525

Application for Pesticide - Section I

1. Company/Product Number Monsanto / 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Roundup WeatherMAX Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(ii), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Final printed labeling for California use
PP# 63003B1-22

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dr. Marsha Gray	Title Registration Manager	Telephone No. (Include Area Code) (202) 783-2460
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped) <div style="text-align: right;">75</div>
2. Signature 	3. Title Manager, Registrations	
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date March 6, 2003	

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3. (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which Label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

76

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



EPA Reg. No. 524-537

Roundup WeatherMAX, Transorb and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR APPLICATION TO ROUNDUP READY SOYBEANS IN THE STATE OF CALIFORNIA ONLY

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

The California Department of Pesticide Regulation has reviewed and authorized the use of this product for applications in Roundup Ready soybeans. Applicators must read and follow the Directions for Use specified in Section 11.4 of the label booklet provided with the product for applications to Roundup Ready soybeans in California.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WeatherMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2003 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

63003B1-22

17

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



EPA Reg. No. 524-537

Roundup WeatherMAX, Transorb and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR APPLICATION TO ROUNDUP READY SOYBEANS IN THE STATE OF CALIFORNIA ONLY

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

The California Department of Pesticide Regulation has reviewed and authorized the use of this product for applications in Roundup Ready soybeans. Applicators must read and follow the Directions for Use specified in Section 11.4 of the label booklet provided with the product for applications to Roundup Ready soybeans in California.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WeatherMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

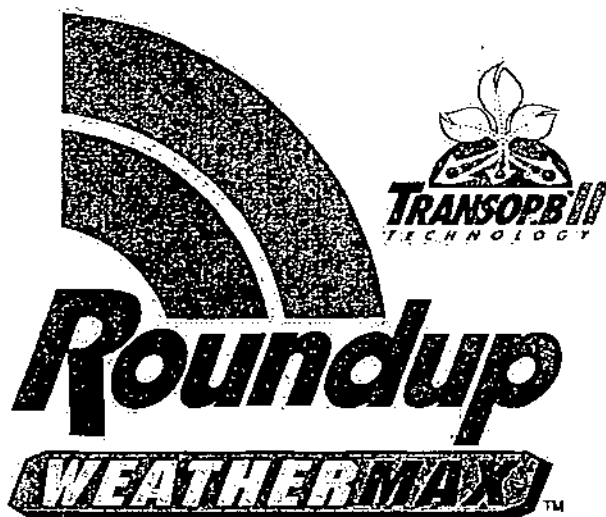
©2003 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

63003B1-22

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



EPA Reg. No. 524-537

Roundup WeatherMAX, Transorb and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR APPLICATION TO ROUNDUP READY SOYBEANS IN THE STATE OF CALIFORNIA ONLY

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

The California Department of Pesticide Regulation has reviewed and authorized the use of this product for applications in Roundup Ready soybeans. Applicators must read and follow the Directions for Use specified in Section 11.4 of the label booklet provided with the product for applications to Roundup Ready soybeans in California.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WeatherMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2003 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

63003B1-22

79

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



EPA Reg. No. 524-537

Roundup WeatherMAX, Transorb and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR APPLICATION TO ROUNDUP READY SOYBEANS IN THE STATE OF CALIFORNIA ONLY

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

The California Department of Pesticide Regulation has reviewed and authorized the use of this product for applications in Roundup Ready soybeans. Applicators must read and follow the Directions for Use specified in Section 11.4 of the label booklet provided with the product for applications to Roundup Ready soybeans in California.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WeatherMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2003 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

63003B1-22

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



EPA Reg. No. 524-537

Roundup WeatherMAX, Transorb and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR APPLICATION TO ROUNDUP READY SOYBEANS IN THE STATE OF CALIFORNIA ONLY

Keep out of reach of children.

CAUTION!

—In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

The California Department of Pesticide Regulation has reviewed and authorized the use of this product for applications in Roundup Ready soybeans. Applicators must read and follow the Directions for Use specified in Section 11.4 of the label booklet provided with the product for applications to Roundup Ready soybeans in California.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WeatherMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2003 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

63003B1-22

82



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

FEB - 6 2003

Mr. Stephen J. Wratten
Monsanto Company
600 13th Street, N.W. Suite 660
Washington, DC 20005

Mr. Wratten:

Subject: Roundup Weather Max Herbicide (Control of Glyphosate Tolerant Horseweed
(Marestail)
EPA Registration No. 524-537
Your Application Dated December 2, 2002

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable. A stamped copy of labeling is enclosed for your records.

Supplemental labeling must be incorporated into a master label and copies of the master labeling submitted to the Agency for our files at your next printing or within 2 years from the date of acceptance of supplemental labeling. The Agency will consider a convincing argument as to why a supplemental label should not appear on a master label on a case by case basis.

Sincerely,

James A. Tompkins
James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

Supplemental Labeling

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container for each product and on this supplemental labeling.

Roundup WeatherMAX Herbicide Logo

EPA Reg. No. 524-537

Roundup WeatherMAX and Roundup Ready are registered trademarks of Monsanto Company

**FOR CONTROL AND MANAGEMENT OF GLYPHOSATE RESISTANT HORSEWEED
(MARESTAIL, *Conyza canadensis*) IN COTTON, CORN, AND SOYBEANS.**

Keep out of reach of children.
CAUTION!

In case of an emergency involving this product, Call Collect, day or night (314) 694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This label must be in the possession of the user at the time of herbicide application. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY CROPS).

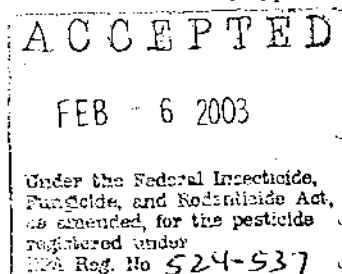
See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for Roundup WeatherMAX herbicide for essential product performance information.

For ground applications, use 10 to 20 gallons of water per acre. For aerial applications, use 3 to 15 gallons of water per acre. For tank-mix recommendations, read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used.

Cotton:

Preplant:

For control of horseweed, apply this product (22 fluid ounces per acre) in a tank-mix with Clarity® (8 fluid ounces per acre). This application must be made 21 to 35 days before planting and before horseweed reaches 6 inches in height. In order to avoid crop injury, a minimum interval of 21 days during which there is at least 1 inch of cumulative rainfall must be observed between Clarity application and planting of cotton.



Post-directed (Roundup Ready® Cotton varieties only):

Management of early season weed competition and the development of a crop height differential between cotton and the horseweed is often achieved by a combination of preplant burndown and post emergent over-the-top and/or directed applications of Roundup WeatherMAX herbicide. These measures enhance the development of a height differential that is necessary to successfully make post-directed treatments. In-crop post-directed applications of MSMA (2 pounds active ingredient per acre) tank-mixed with diuron (0.5 to 0.75 pounds active ingredient per acre) should be made when the temperature is 80°F or higher.

Soybeans:

Preplant:

Apply a tank mixture of this product (22 fluid ounces per acre) with 2,4-D (0.5 pounds a.i. per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting. For areas where 2,4-D cannot be applied due to application restrictions or proximity to a sensitive crop, contact your local retailer and Monsanto representative.

In-crop (Roundup Ready Soybean varieties only):

It is strongly encouraged that horseweed should be controlled prior to planting using recommended preplant burndown treatments. In-crop Roundup Ready soybeans, apply a tank mixture of this product (22 fluid ounces per acre) with Amplify™ (0.3 ounces per acre). This treatment should be used as a salvage treatment only for a horseweed infestation that was not controlled preplant. Application should be made between full emergence of the first trifoliate leaf and 50% flowering stage of soybeans. At the time of treatment, horseweed should not exceed 6 inches in height.

Corn:

Preplant, At-Planting, Preemergence:

Apply a tank mixture of this product (22 fluid ounces per acre) plus 2,4-D (0.5 pounds a.i. of per acre) before horseweed exceeds 6 inches in height. See the 2,4-D product label for time intervals that are required between application and planting.

Atrazine (1 to 2 pounds active ingredient per acre) may be included in the tank-mixture to provide residual control. Refer to the atrazine product label for specific use instructions.

In-crop (Roundup Ready Corn hybrids only):

In-crop Roundup Ready corn, apply a tank-mixture of this product (22 fluid ounces per acre) plus Clarity (8 to 16 fluid ounces per acre) or 2,4-D (0.5 to 1.0 pounds a.i. per acre). Apply between corn emergence and the 5-leaf stage of growth (approximately 8 inches tall).

ATTENTION

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Amplify, Roundup WeatherMAX, Roundup Ready, and Transorb II are registered trademarks of Monsanto Company. Clarity is a trademark of BASF Corp.

1. IS A PUBLIC LAW NECESSARY?		2. PETITION NO.		3. RECEIVED BY TEAM	
<input type="checkbox"/> YES	<input type="checkbox"/> NO			<input type="checkbox"/> YES	<input type="checkbox"/> NO
4. METHOD OF SUPPORT		5. PRODUCT MANAGER		6. PROJECTED REVIEW	
<input type="checkbox"/> 1A	<input type="checkbox"/> 1B	<input type="checkbox"/> 1C		<input type="checkbox"/> YES	<input type="checkbox"/> NO
7. DATE PUBLISHED		8. DATE PUBLISHED		9. ACTION TYPE	
1/28/03	AWP			Control of <i>dephosphated</i> <i>resistant</i> <i>hormones</i> 300	
10. REVIEW TYPE		11. REVIEWER CODE		12. SIGNATURE OF REVIEWER	
		(Initials)			
A	REVIEWABILITY TEAM				
B	PRODUCT MANAGER TEAM EFFICACY REVIEW				
C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW				
D	PRODUCT MANAGER TEAM COMMERCIAL SAFETY REVIEW				
E	PRODUCT MANAGER TEAM RECOMMENDATION REVIEW				
F	PRODUCT MANAGER				
G	INTERAGENCY REFERRAL				
H	COST-BENEFIT REVIEW				
I	PUBLIC COMMENTS REVIEW				
J	EEB BRANCH INFECTIOUS EFFICACY				
K	EEB BRANCH HERBICIDE EFFICACY				
L	EEB BRANCH FUNGICIDE EFFICACY				
M	EEB BRANCH ROENTGENIC EFFICACY				
N	EEB BRANCH DIMMECTARY EFFICACY				
O	CHEMISTRY BRANCH RESIDUE CHEMISTRY				
P	EEB BRANCH ENVIRONMENTAL CHEMISTRY				
Q	TOXICOLOGY BRANCH HUMAN SAFETY				
R	EEB BRANCH ENVIRONMENTAL SAFETY				
S					
T					
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE	
				VIEW NAC 011 218 013	



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OPP Identifier Number

294467

Application for Pesticide - Section I

1. Company/Product Number Monsanto / 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Roundup WeatherMAX Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 600 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. 1218102 Product Name	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated
<input type="checkbox"/> Resubmission in response to Agency letter dated	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Supplemental labeling for glyphosate tolerant horseweed

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)	
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dr. Russell Schneider	Title Director, Registration	Telephone No. (Include Area Code) 202-783-2460
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		Date Application Received (Stamped)
2. Signature 	3. Title Manager, Registrations	
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date December 2, 2002	

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). (If not exempted by 40 CFR 152.81 (b) (4));
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections II, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

Company/Product Number - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.

EPA Product Manager - If known, fill in the name and PM number of the EPA Product Manager.

Proposed Classification - Specify the proposed classification of this product.

Product Name - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only.

Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Name and Address of Applicant - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

Expedited Review - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for registration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

Subject of submission - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

Type of Packaging - Check the appropriate block if your product will be packaged in the indicated packaging types.

Indicate the size of the individual packets and number per retail container.

Type of Retail Container - Indicate type of container in which product will be marketed.

Location of Net Contents - Indicate the location of the net contents information for your product.

Size(s) of Retail Container - Specify the net contents of all retail containers for your product.

Location of Use Directions - Indicate the location of the use directions for your product.

Manner in which label is affixed to product - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, submission, "me-too," reregistration, etc.

5. Self-explanatory.

EPA Use Only.

87

MONSANTO



MONSANTO COMPANY
600 15TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

December 2, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: Roundup WeatherMAX Herbicide (EPA Reg. No. 524-537)
Supplemental Labeling for Glyphosate Tolerant Horseweed

Dear Mr. Tompkins:

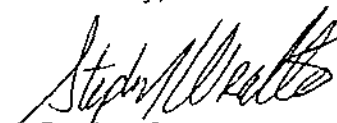
Field experiences in 2002 have reported that isolated populations exist of a common annual weed known as marestail or horseweed (*Conyza canadensis*) that are not controlled in all cases by labeled rates of glyphosate herbicides. Although these resistant populations are not widespread, Monsanto desires to take proactive measures to eliminate them from agricultural fields where possible and certainly to limit their spread. With that goal in mind, we desire to add supplemental labeling that provides growers with specific recommended steps to take, and provide three copies of a proposed supplemental label for Agency review and approval. Monsanto will submit this label for state approval in areas where marestail resistance has been found. It will apply on a county by county basis, as specified by Monsanto.

Generally, the approach is to use tank mixtures with other labeled herbicides in the major crops to control horseweed either before planting or when the weed is small in-crop. These tank mixtures could be practiced today, since all component herbicides are already labeled for the proposed uses, so this supplemental label seeks merely to provide a single convenient source of effective treatment directions. Once approved, this text will be

proposed for other Monsanto glyphosate herbicides to achieve consistency in the recommendations. We will also offer these recommendations to other glyphosate registrants.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

Weathermax horseweed.doc

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

November 11, 2002

Office of Pesticide Programs (7504C)
Document Processing Center (NOTIF)
U.S. Environmental Protection Agency
Crystal Mall #2, Room 266A
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: Roundup WeatherMAX Herbicide (EPA Reg. No. 524-537)
Submission of Final Printed Label Booklet

Dear Mr. Tompkins:

Monsanto is submitting for your files, three (3) copies of the final printed label booklet for Roundup WeatherMAX Herbicide (EPA Reg. No. 524-537, Print Plate No. 63003A2-1/53). This alternate brand name was notified to the EPA under approved (EPA Reg. No. 524-537). The only revision to this booklet is the addition of a barcode on the cover.

"This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA."

If you have any questions regarding this submission, please feel free to contact me through Dr. Marsha Gray or directly at 314-694-9036.

Sincerely,

Debra Hinton
Registration Specialist

cc: M. Gray
S. Wratten



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

265151

Application for Pesticide - Section I

1. Company/Product Number Monsanto / 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Roundup WeatherMAX Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(ii), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Final printed label booklet
Print Plate No. 63003A2-1/53

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
* Certification must be submitted		If "Yes" Unit Packaging wgt. _____ No. per container _____	If "Yes" Package wgt. _____ No. per container _____		
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dr. Marsha Gray	Title Registration Manager	Telephone No. (include Area Code) (202) 783-2460
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Registration Specialist	
4. Typed Name Debra Hinton	5. Date November 11, 2002	

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29); If not exempted by 40 CFR 152.81 (b) (4);
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OCT - 9 2002

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mr. Stephen J. Wratten
Monsanto Company
600 13th Street, N. W. Suite 660
Washington, DC 20005

Dear Mr. Wratten:

Subject: MON 007 Herbicide (Revise Pastures, Forage Legumes, and Rangeland))
EPA Registration No. 524-537
Your Application Dated April 22, 2002

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable. A stamped copy of labeling is enclosed for your records.

Supplemental labeling must be incorporated into a master label and copies of master labeling submitted to the Agency for our files at your next printing or within two (2) years from the date of acceptance of supplemental label, whichever comes first. The Agency will consider a convincing argument as to why a supplemental label should not appear on a master label on a case by case basis.

Sincerely,

James A. Tompkins
James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

3. IS A PUBLIC INFORMATION DISCLOSURE?		4. PETITION NO.		5. RECEIVED BY TEAM	
<input type="checkbox"/> YES	<input type="checkbox"/> NO			<input type="checkbox"/> YES	<input type="checkbox"/> NO
6. METHOD OF SUPPORT		7. PRODUCT MANAGER		8. PROJECTS RETURN	
<input type="checkbox"/> 10	<input type="checkbox"/> 15	<input type="checkbox"/> 10	<input type="checkbox"/> 15	<input type="checkbox"/> YES	<input type="checkbox"/> NO
9. DATE FILLED		10. DATE FILLED		11. ACTION TYPE	
10/4/02	AWP			Revue postures, foreign sequences, marketing 330	
12. DATE REVIEW COMPLETED		13. DATE REVIEW COMPLETED		14. DATE REVIEW COMPLETED	
<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> YES	<input type="checkbox"/> NO
15. REVIEW TYPE		16. REVIEWER CODE (DIPLOMA)		17. SIGNATURE OF REVIEWER	
A. REVIEWABILITY TEAM					
B. PRODUCT MANAGER TEAM EFFICACY REVIEW					
C. PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW					
D. PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW					
E. PRODUCT MANAGER TEAM REGISTRATION REVIEW					
F. PRODUCT MANAGER				VKW NAC 1/00/02	
G. INTERAGENCY REFERRAL				Tolerances published	
H. COST-BENEFIT REVIEW				9/27/02	
I. PUBLIC COMMENTS REVIEW					
J. EEE BRANCH INSECTICIDE EFFICACY					
K. EEE BRANCH HERBICIDE EFFICACY					
L. EEE BRANCH FUNGICIDE EFFICACY					
M. EEE BRANCH ROENTGENING EFFICACY					
N. EEE BRANCH DISINFESTANT EFFICACY					
O. CHEMISTRY BRANCH RESIDUE CHEMISTRY					
P. EEE BRANCH ENVIRON. HEALTH CHEMISTRY					
Q. PHYSIOLOGY BRANCH HUMAN SAFETY					
R. EEE BRANCH ENVIRON. HEALTH SAFETY					
S.					
T.					
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE	

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR MON 007 HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using MON 007 Herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

MON 007
Herbicide Logo

EPA Reg. No. 524-537

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

MON 007 is a registered trademark of Monsanto Technology LLC.

DIRECTIONS FOR USE

APPLICATIONS IN PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

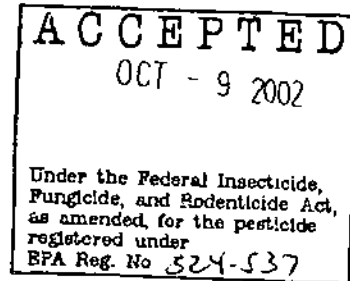
This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for MON 007 Herbicide for essential product performance information.

GENERAL USE INSTRUCTIONS: This product may be applied to turf or pasture grasses, forage legumes, and rangelands for weed control as directed below. Apply 8 fluid ounces to 3.3 quarts per acre according to the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" in the product label booklet.

GENERAL PRECAUTIONS, RESTRICTIONS: Follow the specific limitations below with regard to application methods, timing, treatment rates, and post-application intervals. All applications must be made at least 30-days before planting any crop that is not specified for treatment in the MON 007 Herbicide label booklet or its supplemental labeling.



1. Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Spot Treatment, Wiper Applications Over-the-Top, Renovation, Preharvest (except Kenaf and Leucaena).

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application. The crop may be fed or grazed as soon as it reaches sufficient maturity.

Preharvest (except Kenaf and Leucaena)

USE INSTRUCTIONS: This product may be used in declining stands or any stand where severe crop injury or destruction is acceptable. This product will control annual and perennial weeds, including quackgrass, when applied prior to crop harvest. Applications may be made at any time of the year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS:

Make only one application to an existing crop stand per year. The treated crop and weeds can be harvested and fed to livestock according to the intervals below.

	Maximum Single Application Rate	Minimum Interval between application and harvest / grazing
Alfalfa	44 fluid ounces	36 hours
All other labeled legumes above	32 fluid ounces	3 days

This application may destroy an alfalfa stand and may severely injure or destroy other labeled crops such as clover. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot Treatment or Wiper Applications Over-the-Top

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators. For wipers, see the "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of the product label booklet. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 3 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover, and other labeled forage legumes. If the crop is to be grazed or harvested for feed, use up to 44 fluid ounces per acre in alfalfa and up to 32 fluid ounces per acre in other labeled legumes. For complete removal of established stands of clover, it may be necessary to use the higher treatment rates listed in the "PERENNIAL WEEDS RATE TABLE" in the label booklet.

PRECAUTIONS, RESTRICTIONS: When treatment rates of 44 fluid ounces per acre for alfalfa or 32 fluid ounces per acre for other forage legumes are used, remove domestic livestock before application and wait 3 days after application before reintroduction. If treatment rates above these levels are necessary, do not graze or harvest treated foliage for livestock feed. Crops listed for treatment in the label booklet may be planted into the treated area at any time; for other crops, wait 30 days between application and planting.

2. Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications Over-the-Top.

Renovation (Rotating out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations. For any crop not listed for treatment in this product's label booklet, applications must be made at least 30 days prior to planting.

Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications Over-the-Top

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Do not apply more than 2 quarts per acre per year onto CRP grasses.

3. Grass Seed or Sod Production

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed in this product's label booklet under "CEREAL CROPS".

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Renovation, Site Preparation, Shielded Sprayers, Wiper Applications Over-the-Top, Spot Treatments, Creating Rows in Annual Ryegrass.

Preplant, Preemergence, At-Planting, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation prior to renovating turf or forage grass seed areas or establishing turf grass grown for sod. Make applications before, during, or after planting or for renovation. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide

best control. Broadcast equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

PRECAUTIONS, RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts. If application rates total 2 quarts per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. For any crop not listed for treatment in this product's label booklet, applications must be made at least 30 days prior to planting. Applications must be made prior to the emergence of the crop to avoid crop injury.

Shielded sprayers

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces of this product in 10 to 20 gallons of water per acre to control weeds between grass seed rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by the protective shields. For additional instructions, see "Hooded and Shielded Applicators" in the "SELECTIVE EQUIPMENT" section of this product's label booklet.

PRECAUTIONS, RESTRICTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications Over-the-Top

USE INSTRUCTIONS: Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. For additional instructions, see "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this product's label booklet.

PRECAUTIONS, RESTRICTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction.

Spot treatments

USE INSTRUCTIONS: Use a 1.0-percent solution.

PRECAUTIONS, RESTRICTIONS: Apply this product prior to heading of grasses grown for seed. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason. Hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 11 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS, RESTRICTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use

of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

Grower assumes all responsibility for crop losses from misapplication.

4. Pastures

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed in this product's label booklet under "CEREAL CROPS". Including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuya grass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

TYPES OF APPLICATIONS: Preplant, Preemergence, Spot Treatment, Wiper Applications Over-the-Top, Pasture renovation, Postemergent Weed Control (Broadcast Treatments).

Preplant, Preemergence and Pasture Renovation

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: If application rates total 2 quarts per acre or less, no waiting period between treatment and feeding of livestock grazing is required. If the rate is greater than 2 quarts per acre, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting. Crops listed for treatment in the label booklet may be planted into the treated area at any time; for other crops, wait 30 days between application and planting.

Spot Treatment and Wiper Applications Over-the-Top

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatments or wiper application methods using rates of 2 quarts per acre or less, the entire field or any portion of it may be treated. When spot treatments or wiper application are made using rates above 2 quarts per acre, no more than 10 percent of the total pasture may be treated at any one time. To achieve maximum performance, remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting.

Postemergent Weed Control (Broadcast Treatments)

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of annual weeds and undesirable vegetation in pastures. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable perennial grasses break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of perennial grasses will occur if broadcast applications are made when plants are not dormant. No waiting period is required between application and grazing or harvesting for feed. Use of higher application rates will cause stand reductions. Do not apply more than 2 quarts per acre per year onto pasture grasses except for renovation uses (see instructions above). If replanting is needed due to severe stand reduction, applications must be made at least 30 days prior to planting any crop not listed for treatment in this product's label booklet.

5. Rangelands

TYPES OF APPLICATIONS: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

USE INSTRUCTIONS: Apply 8 to 11 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 11 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Controlled burning may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

PRECAUTIONS, RESTRICTIONS: Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off. Do not use ammonium sulfate when spraying rangeland grasses with this product. No waiting period between treatment and feeding of livestock grazing is required. Do not apply more than 2 quarts per acre per year.

Read the "Limit of Warranty and Liability" in the label booklet for MON 007 Herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

© [DATE] MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

B

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OPP Identifier Number

288007

Application for Pesticide - Section I

1. Company/Product Number 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) MON 007 Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. 512/02 Product Name	

Section - II

<input checked="" type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated
<input type="checkbox"/> Resubmission in response to Agency letter dated	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Supplemental labeling for pastures, forage legumes, and rangelands

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
* Certification must be submitted				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
IL "Yes" Unit Packaging wgt.	No. per container	IL "Yes" Package wgt.	No. per container	<input type="checkbox"/> Other (Specify)	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dr. Marsha Gray	Title Product Registration Manager	Telephone No. (Include Area Code) (202) 783-2460
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		8. Date Application Received (Stamped)
2. Signature 	3. Title Manager, Registrations	
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date April 22, 2002	

101

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, end-use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-to-o," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

April 22, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: MON 007 Herbicide (EPA Reg. No. 524-537)
Supplemental Labeling for Pastures, Forage Legumes, and Rangelands

Dear Mr. Tompkins:

Monsanto has received the Agency's letter dated 21-Mar-2002 and the associated residue study reviews and risk assessments concerning new uses in pastures, forage legumes, and rangelands. In response to the reviewers conclusions communicated in the letter, on 19-Apr-2002 we submitted revised Roundup Ultra (524-475) Section B labeling for the two pending tolerance petitions that pertain to "grass, forage, fodder, and hay group" and "non-grass animal feeds group". We desire to have the same new uses also labeled on MON 007 Herbicide, and herein are identical labels, except for adjusted use rates based on glyphosate content.

Based on the Master Label format for MON 007 Herbicide as approved 11-Apr-2002, these application instructions are located together in Section I.10 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS. I have removed the text of that Section, amended it to include the new use patterns, and formatted it here as a 6-page Supplemental Label for ease of review. When approved, it can easily be substituted back into the Master Label.

The proposed labeling now permits the Spot Treatment, Wiper Applications Over-the-Top, and Preharvest broadcast sprays for all non-grass forage legumes, with the preharvest spray limited according to the rates and PHI / PGI specified in the table. It also permits the applications by various selective equipment or broadcast sprays at rates of 2.25 lb ae glyphosate per acre or less in all grass cropping situations without the need of waiting before harvesting or grazing.

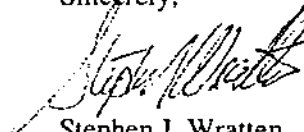
103

The Agency's direction regarding 30-day plant back restrictions and 0-day PHI / PGI for grasses has been implemented here as it was in the above-mentioned Roundup Ultra label.

When the tolerance petition actions are finalized, we request that you also stamp this label for MON 007 Herbicide.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 007 Grasses and Non-Grasses.doc



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

OCT - 9 2002

Mr. Stephen J. Wratten
Monsanto Company
600 13th Street, N. W. Suite 660
Washington, DC 20005

Dear Mr. Wratten:

Subject: MON 78270 Herbicide (Request Change In WPS)
EPA Registration No. 524-537
Your Letter Dated July 11, 2002

The scientific review and evaluation of the letter submitted above, requesting a change in the WPS language, have been completed. The following are our comments and conclusions.

1. The Personnel Protective Equipment (PPE) on your label may be revised to read as below.

Personal Protective Equipment (PPE)

Mixers, loaders, other handlers and applicators when handling this concentrated product or its application solutions of 30% concentration must wear: long sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mls in thickness or greater, composed of materials such as butyl rubber, neoprene rubber, natural rubber, or nitrile rubber.

Applicators when handling only spray solutions where concentration is 30% of this product or less must wear long-sleeved shirt and long pants, shoes, and socks.

Follow manufacturers instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry...

2. ~~At~~ the beginning or the list Personal Protective Clothing (PPE) within the Precautionary Statements, add the statements "Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

3. In addition, revise you may revise your current glove requirement to read " chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

105

4. Within the list of PPE for early re-entry in the Agricultural Use Requirements box, you may revise your current glove requirement to "chemical resistant gloves made of any waterproof material."

Sincerely,

James A. Tompkins

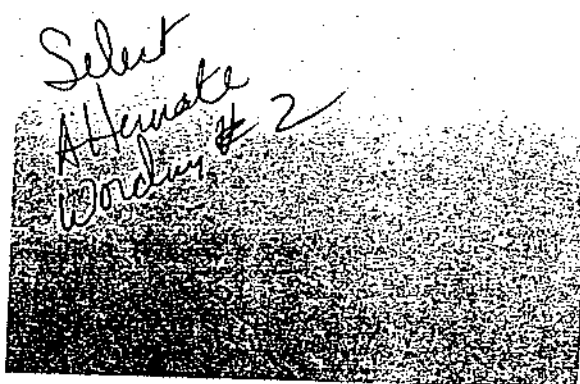
James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

3. IS A PUBLIC LAW NECESSARY?		4. PETITION NO.		5. RECEIVED BY	
<input type="checkbox"/> YES	<input type="checkbox"/> NO			NO	YES
6. METHOD OF SUPPORT		7. PRODUCT MANAGER		8. PROJECTED RETURN	
<input type="checkbox"/> 1A	<input type="checkbox"/> 1B	<input type="checkbox"/> 1C		NO	YES
9. DATE FILED		10. DATE FILED IN		11. ACTION TYPE	
10/4/02	WPS			Request (letter) change in WPS language 300	
12. REVIEW TYPE		13. REVIEWER CODE		14. SIGNATURE OF REVIEWER	
15. REVIEW CODE		16. REVIEWER CODE		17. DATE REVIEW COMPLETED	
18. REVIEW CODE		19. REVIEWER CODE		20. DATE REVIEW COMPLETED	
A	REVIEWABILITY TEAM				
B	PRODUCT MANAGER TEAM EFFICACY REVIEW				
C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW				
D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW				
E	PRODUCT MANAGER TEAM RESOURCES REVIEW				
F	PRODUCT MANAGER			UKW	110 014 012
G	INTERAGENCY REFERRAL			allow second proposal	
H	COST-BENEFIT REVIEW			based on note from	
I	PUBLIC COMMENTS REVIEW			J. Tompkins	
J	SEE GRAMEN INSECTICIDE EFFICACY				
K	SEE GRAMEN - INSECTICIDE EFFICACY				
L	SEE GRAMEN - FUNGICIDE EFFICACY				
M	SEE GRAMEN - HERBICIDE EFFICACY				
N	SEE GRAMEN - INSECTICIDE EFFICACY				
O	ENVIRONMENTAL GRAMEN RESIDUE CHEMISTRY				
P	SEE GRAMEN ENVIRONMENTAL CHEMISTRY				
Q	TOXICOLOGY GRAMEN HUMAN SAFETY				
R	SEE GRAMEN ENVIRONMENTAL SAFETY				
S					
T					
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE	
				CODE	

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>



July 11, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: MON 78270 Herbicide (EPA Reg. No. 524-537)
PPE – Diluted Application Solutions

Dear Mr. Tompkins:

On 11-Apr-2002, EPA approved the registration of this new potassium glyphosate based agricultural use herbicide product. The Agency's review (Attachment A) of acute toxicity data conducted on the concentrated product as sold showed Category III Skin Irritation (MRID 45504806). In addition, Monsanto submitted a second skin irritation study (MRID 45504807) conducted on a 3 : 7 MON 78270 : water (30%) spray dilution which was judged by the Agency to be Category IV.

Monsanto's initial label proposal for MON 78270 Herbicide included the PPE dictated by the results of testing on the concentrated product as sold, including a requirement for Chemical Resistance Category A gloves. In addition, we proposed a short paragraph to remove the glove requirement once users had diluted the product to the 30% level or lower. EPA's Label Manual (Attachment B) states that EPA policy allows such additional precautionary statements pertaining to USE DILUTIONS provided that supporting data are submitted, and we attempted to comply with that guidance. However, we learned verbally that EPA was not initially willing to approve the label as proposed with this additional PPE paragraph, and Monsanto elected to defer further discussion by removing the questionable paragraph in order to facilitate approval.

However, at this time, we wish to re-open the idea of arriving at workable label language for this product that will acknowledge the submitted and reviewed scientific data on skin irritation of diluted spray solutions of MON 78270 Herbicide. We believe that since the EPA's Label Manual clearly describes a policy framework for such supplemental Precautions, there must be wording that can be judged to be acceptable.

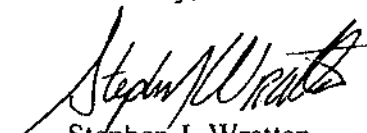
We believe that it is to user's benefit to share the existing skin irritation study findings for diluted concentrations via this PPE text. Although pesticide mixers and loaders may commonly wear gloves, since the work time duration is relatively short, applicators do not want to wear gloves while actually spraying for reasons of comfort and dexterity. In addition, continued wearing of the same gloves used during mixing and loading can transfer residues to steering wheels and other parts of the spray rig that later may come in contact with skin. When data and labeling can be established to permit gloves during mixing and loading but not require them during application, it serves to obviate these issues. Since the data in hand support the safety of such an approach, it remains only to arrive at appropriate language.

Monsanto chose to test (MRID 45504807) the 30% spray dilution because this concentration will exceed that of more than 98% of users' spray application solutions for MON 78270 herbicide. However, we cannot state across-the-board that gloves are not needed during any application operation, because in specialized cases, such as cut stumps or wiper treatments, higher product concentrations ranging from 33 - 100% of the concentrate level are labeled. When applications are made with these very high concentration solutions, Monsanto believes that continued use of gloves to avoid skin irritation is advisable.

Attachment C lists the presently approved PPE label text, the originally proposed language, and 2 new alternate possible wording proposals that Monsanto would willingly propose via a label amendment if either is approvable. I request that you consider the relative merit of these to determine which would be a preferable solution to this dilemma. Based on your feedback, I will submit a label amendment.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-783-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 78270 PPE.doc

109



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

December 26, 2001

MEMORANDUM

Attachment A: 1st four pages
11-July-2002 Letter
MON 78270 Herbicide (524-537)

Subject: MON 78270 Herbicide
EPA Reg. No. 524-LGT
DP Barcode: D278542
Case No: 071205
PC Code: 103613

From: Tracy Keigwin *TK*
Technical Review Branch
Registration Division (7505C) *JCR*

To: Vickie Walters
Herbicide Branch
Registration Division (7505C)

Applicant: Monsanto Co.
800 N. Lindbergh Blvd.
St. Louis, MO 63167

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt	48.8
<u>Inert Ingredient(s)</u>	<u>51.2</u>
Total:	100.00

ACTION REQUESTED: PM requests review of acute toxicity data for EPA File
Symbol 524-LGT.



AA049522

110

BACKGROUND: Monsanto Company has submitted seven acute toxicity studies in support of registration of MON78270, EPA Reg. No. 524-LGT. The studies were assigned the following MRID numbers:

Acute oral toxicity	MRID 45504802
Acute dermal toxicity	MRID 45504803
Acute inhalation toxicity	MRID 45504804
Primary eye irritation	MRID 45504805
Primary skin irritation*	MRID 45504806
Dermal sensitization	MRID 45504808

*An additional Primary Skin Irritation Study was also submitted utilizing a 30% dilution of MON 78270. This was assigned an MRID of 45504807

The studies were conducted at Springborn Laboratories, Inc., Spencerville, Ohio.

RECOMMENDATIONS: The seven studies have been reviewed and are classified as acceptable.

The acute toxicity profile for EPA Reg. No. 524-LGT is as follows:

Acute oral toxicity	IV	Acceptable	MRID 45504802
Acute dermal toxicity	IV	Acceptable	MRID 45504803
Acute inhalation toxicity	III	Acceptable	MRID 45504804
Primary eye irritation	III	Acceptable	MRID 45504805
Primary skin irritation*	III	Acceptable	MRID 45504806
Dermal sensitization	No	Acceptable	MRID 45504808

The acute toxicity category for the additional Primary Skin Irritation Study utilizing a 30% dilution of MON 78270 is as follows:

Second Primary Skin Irritation Study (30% dilution of MON 78270)	IV	Acceptable	MRID45504807
---	----	------------	--------------

NOTE TO PM: This product requires Child Resistant Packaging (CRP) since the acute Inhalation LC₅₀ for both male and female rats is between 0.77 mg/L and 2.21 mg/L (observed) and there are residential uses on the label.

LABELING: Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System.

Label Review System

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals:

CAUTION

Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Handlers must wear:

Long sleeved shirt and pants

Shoes and socks

Chemical resistant gloves (such as nitrile or butyl) gloves

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Wash thoroughly with soap and water after handling. Wash hands before eating, drinking chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

Attachment B
Chapter 8, pg 21-23
EPA Label Manual

11-Jul-2002 Letter
MON 78270 Herbicide
(524-537)

- Any product which is corrosive or classified as toxicity category I for eye or skin.
- Products that are in acute oral toxicity category III, and contain > 10% petroleum distillate.
- Any product that produces physiological effects requiring specific antidotal or medical treatment such as: Cholinesterase Inhibitors (e.g., carbamates and phosphorothioates, and organophosphates); Metabolic Stimulants (e.g., dichlorophenols); Anticoagulants (e.g., warfarin).

B. Contents of Note: The proposed rule does not provide specific notes to physicians except for corrosive and toxicity category I and II eye and skin irritants. The proposed rule does provide the following guidance concerning the content of notes to physicians. Check the label under review to make certain that it addresses the following information:

- technical information on symptomatology;
- use of supportive treatments to maintain life functions; medicine that will counteract the specific physiological effects of the pesticide;
- company telephone number to specific medical personnel who can provide
- specialized medical advice.

C. Specific Note for Corrosive or Toxicity Category I Eye or Skin Irritants:

Use the following Note to Physician:

"Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage."

D. Required Location: The "Note to Physician" should be located in close proximity to the "First Aid Statement" but should be clearly distinguished from it. In other words, it should not be mixed in with the "First Aid Statement" but should appear below the last first aid statement.

8. LABELING STATEMENTS FOR SPECIAL SITUATIONS

- A. Chemigation statement (PR Notice 93-7, Supplement 3, page 39)
- B. Soil incorporation/injection/seed treatment (PR Notice 93-7, Supplement 3, page 39)
- C. Engineering control statements (PR Notice 93-7, Supplement 3, page 50)
- D. ULV and LV uses (PR Notice 93-7, Supplement 3, page 40)

Optional Labeling and Deviations

EPA will consider precautionary statements that deviate from the requirements of this chapter, provided they meet the conditions as described below:

1. **USE DILUTIONS:** Additional precautionary wording and first aid statements on the label are allowed on concentrated products that correspond with a use dilution of the product that is consistent with the product's directions for use. EPA policy allows such labeling provided data are submitted to support such statements. The policy provided guidelines for the submission and review of such data and for the content and placement of associated labeling (Reference: LP96-03).

- A. **Data Requirements:** All data and draft labeling for use dilution precautionary wording and first aid statements should be sent to the appropriate product manager with a request for pesticide amendment.

Use dilution precautionary wording or first aid statements triggered by systemic toxicity (acute oral, dermal or inhalation toxicity) can be supported by calculations. Most systemic toxicity categories span an order of magnitude (10-fold). Therefore, in most cases, if dilutions are an order of magnitude or more, except for category I, they will bump up at least one toxicity category. For example, if the end product toxicity category is II and it will be diluted 10-fold, the diluted product will be at toxicity category III; if it is diluted 100-fold, it will be at toxicity category IV.

Use dilution precautionary wording or first aid statements triggered by skin or eye irritation or dermal sensitization must be supported by new or cited studies. If another registered dilute product (such as a ready to use formulation) has acceptable data and is found similar to the concentrated product after it has been diluted, that data may be used to support revised labeling.

- B. **Labeling Requirements:** It is important to remember that it is not our intent to allow dual sets of precautionary statements and/or first aid statements on the label. Rather, we will allow certain "additional" statements that are applicable to the most concentrated use dilution only. These additional statements (triggered by the toxicity category of the use dilution) should be placed directly after the required statements for the concentrate. Following are some examples (in parentheses) of how use dilution labeling should appear on product labeling: (actual use dilution statements will depend on data submitted).

Precautionary Statements:

"Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing before reuse. (After product is diluted in accordance with the directions for use, goggles or face shield are not required").

First Aid:

"If on skin: Wash with plenty of soap and water. Get medical attention. (If product, diluted in accordance with the directions for use, gets on skin, medical attention is not required.)

2. **TOXICITY CATEGORY IV PRECAUTIONARY LABELING:** If the product is all toxicity category IV (non-sensitizer), precautionary labeling statements are normally not required. However, if a registrant desires to place precautionary labeling on such a product, they may do so. To promote labeling consistency it is recommended that the registrant use precautionary statements triggered by toxicity category III. Registrants may propose alternate labeling which should be reviewed by precautionary labeling reviewers.
 3. **ME-TOO DEVIATIONS:** If a me-too product is citing a product that has optional precautionary statements on the label, such as 1. and/or 2. above, those statements are not required on the me-too if the acute results are available. If you have any questions about the availability of the acute studies, check with the precautionary labeling reviewers.
 4. **OTHER DEVIATIONS:** Registrants may submit WPS and non-WPS precautionary labeling that differ from the requirements in this chapter. Such requests must be supported by data (or substantive justification), which should be routed to precautionary labeling reviewers or the Chemistry and Exposure Branches (CB-I or II) (for PPE). For example, the statement "Do not remove contact lenses, if worn. Get immediate medical attention.", cannot be approved by the Agency without supporting data or rationale.
-

[LRM Index level Up](#) | [OPP Home](#) | [EPA Home](#) | [Comments](#)
[Site Map](#) | [Search OPP](#) | [Search EPA](#)

www.epa.gov/oppfead1/labeling/lrm/chap-08.htm

updated June 5, 2001

ATTACHMENT C – Alternative possible versions of PPE Statements for MON 78270 Herbicide (524-537)

Approved 11-Apr-2002:

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry....

Originally proposed format to which EPA objected:

Personal Protective Equipment (PPE)

Applicators and other handlers of this concentrated product must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Applicators, when handling spray solutions whose concentration is 30% of this product or less, must wear the above PPE, except that gloves are not required during application.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry....

Present alternate proposed format 1:

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber. After product is diluted in accordance with the direction for use to concentrations of 30% or less, gloves are not required.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry....

Present alternate proposed format 2:

Personal Protective Equipment (PPE)

Mixers, loaders, other handlers, and Applicators when handling this concentrated product or its application solutions of 30% concentration or greater must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Applicators when handling only spray solutions whose concentration is 30% of this product or less, must wear long-sleeved shirt and long pants, shoes, and socks.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry....

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

September 5, 2002

Document Processing Center (NOTIF)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

**Subject: Roundup WeatherMAX Herbicide (EPA Reg. No. 524-537)
Supplemental Label for Aerial Application in California
Final Printed Labeling**

Dear Mr. Tompkins:

On 3-Jun-2002, I provided copies of Final Printed labeling for the above product, including the necessary state aerial labels, and additionally provided a listing of minor changes that were made between the stamped and printed documents.

California DPR has been reviewing our product registration application in that state, and objected to the inclusion of the "Part II Non-Crop" aerial instructions in the printed aerial label because the printed Roundup WeatherMAX booklet label does not include use sites that would require such instructions. Monsanto concurs that it was not necessary to include that portion until such use sites are incorporated into printed labeling, even though the printed aerial precautions were consistent with the overall approved language. Therefore, we now have re-printed the label to comply with the state's request. Copies are included for your records. The new print plate number is 63003A2-13.

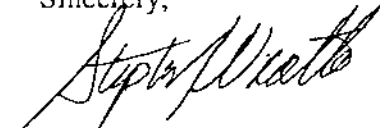
This notification of Final Printed Labeling is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR§ 152.46, and no other changes (beside those outlined herein) have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statements to the EPA. I further understand that if this notification is not

119

consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement actions and penalties under sections 12 and 14 of FIFRA.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-783-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray
T. R. Schafer
Rup WMAX CA aerial FPL.doc



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

294459

Application for Pesticide - Section I

1. Company/Product Number 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Roundup WeatherMAX Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated <u>11-Apr-2002</u>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Print Plate No. 63003A2-13

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Dr. Marsha Gray		Title Registration Manager		Telephone No. (Include Area Code) (202) 783-2460	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					6. Data Application Received (Stamped) <div style="text-align: right;">21</div>
2. Signature 		3. Title Manager, Registrations			
4. Typed Name Stephen J. Wratten, Ph.D.		5. Date September 5, 2002			

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2135), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
1. EPA Use Only.

122

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WeatherMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



NOT REVIEWED
In Accordance with PR Notice 82-8
Based on Draft Labeling Dated

EPA Reg. No. 524-537

Roundup WeatherMAX and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR AERIAL APPLICATION IN CALIFORNIA ONLY
(including Fresno county, California)

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

AVOID DRIFT—DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops:

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.
5. **APPLY BY AIR ONLY TO NONRESIDENTIAL AREAS.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application—To avoid streaking, uneven, or over-lapped application, use appropriate marking devices. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic

coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

CROP USES:

Aerial applications of this product are allowed in the following situations:

1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
2. In alfalfa and pasture renovation applications.
3. Over-the-top applications in Roundup Ready corn and cotton. Refer to further label instructions for Roundup Ready corn and Roundup Ready cotton for specific application instructions for over-the-top applications in these crops.
4. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready corn and Roundup Ready cotton. Refer to the Roundup WeatherMAX herbicide label instructions for Roundup Ready corn and Roundup Ready cotton, for each individual crop.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

Use the recommended rates of this product in 3 to 15 gallons of water per acre.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED THE FOLLOWING MAXIMUM RATES WHEN MAKING APPLICATIONS BY AIR:

22 fluid ounces per acre	44 fluid ounces per acre
	Alfalfa
Corn	
Roundup Ready® Corn	
	Cotton
	Roundup Ready® Cotton
	Fallow
	Reduced Tillage Systems
	Pastures
Wheat	

For FRESNO COUNTY, CALIFORNIA ONLY
(From February 15 through March 31 only)
the following applies:

Applicable Area

This section only applies to the area contained inside the following boundaries within Fresno County, California:

North: Fresno County line
South: Fresno County line
East: State Highway 99
West: Fresno County line

General Information

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Recommendations

A written recommendation MUST be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation MUST state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night—Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of this product, call 1-800-332-3111.

For additional information on the proper aerial application of this product, call 916-784-1718.

Note: For aerial application from April 1 through February 14, refer to the other sections of this supplemental label.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WeatherMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

4/11/02

63003A2-13

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

June 3, 2002

Document Processing Center (NOTIF)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: Roundup WEATHERMAX Herbicide (EPA Reg. No. 524-537)
Final Printed Labeling
11-Apr-2002 Approval

Dear Mr. Tompkins:

On 11-Apr-2002, EPA approved a new herbicide product as EPA Reg. No. 524-537. Following that, on 26-Apr-2002, Monsanto notified the alternate brand name "Roundup WEATHERMAX Herbicide" to the Agency, and provided drafted labeling text for this product, based on the 11-Apr-2002 approval. Enclosed are three copies each of final printed booklet labels, one example container label, and aerial supplemental labels for California and Arkansas that will be used for Roundup WEATHERMAX in the marketplace.

Label Type	Print Plate No.	Comparison of stamped vs printed
Booklet	63003A1-1/53	Printed with minor deviations from stamped text (see A attached)
Container (30-Gal drum)	63003A1-4/53X2 *	Constructed from stamped text intended for container labeling.
Aerial - CA / Fresno	63003A1-13	Printed with minor deviations from stamped text (see B attached)
Aerial - AR	63003A1-12	Printed as stamped

* Note: A photocopy of the gummed drum label is supplied for ease of storage

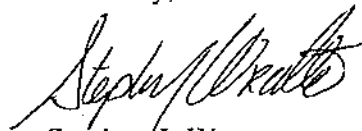
107

This notification of minor label revisions during preparation of the Final Printed Label is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR§ 152.46, and no other changes (beside those outlined herein) have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statements to the EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement actions and penalties under sections 12 and 14 of FIFRA.

The submitted Final Printed Label contains several minor corrections of typographical errors and grammar improvements as described in the attached list. These changes do not expand the allowed scope of use sites, pests, or application rates beyond those already approved and serve to make the label more understandable by purchasers. There are several instances of voluntary reduction in the scope of use that are also permitted by registrants; these reductions in product scope apply solely to the marketing of this branded product and are not intended to constitute any change to the underlying scope of the registration itself that would pertain to other products or labels associated with this registration.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-783-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

WeatherMAX FPL.doc

A. Minor differences between 11-Apr-2002 Master Label approval and Final Printed Booklet

1. The booklet is based on "Part I – Crops" of the Master Label – Parts II, III, and IV are not included.
2. "Roundup WEATHERMAX Herbicide" and "524-537" substituted for placeholder text throughout.
3. Certain approved marketing statements have not been printed at this time. (Page 2)
4. Container-specific statements (stamped text pages 2, 3, and 8) are removed to the appropriate containers – see the enclosed box label, for example.
5. Monsanto's Patent Attorney has directed a patent number update. (page 5).
6. Monsanto has made a voluntary rate reduction at the low end of the rate ranges throughout the labeling. The approved 12-fluid-ounce rate is reduced to 11 fluid ounces to more accurately reflect an exact acid equivalent rate translation from Roundup UltraMAX. Likewise, approved 28-fluid-ounce rates reduced to 27 fluid ounces.
7. Section 5.0 Stage of Weeds, last paragraph. Wording of sentence concerning "poor growing conditions" was rearranged slightly to clarify meaning for precisely.
8. Section 7.4, For Rope or Sponge Wick Applicators. Add the word "above" to the final sentence of this paragraph to clarify which weeds are intended.
9. Section 8.2 Corn, Aim Herbicide was added to tank mixes based on approval of supplemental label in Master Label II.D for preplant tank mixtures with Aim.
10. Section 9.1, Berry Crops, LABELED CROPS, "Raspberry (black, red)" has been voluntarily deleted based on crop injury concerns.
11. Section 9.4, Non-Food Tree Crops. The stamped text inadvertently appeared to limit "Site Preparation" to Christmas Trees, even though LABELED CROPS clearly indicated that many types of Non-Food Tree crops are included. This error was corrected in the printed label by the omission of the words "Christmas Trees" in the first sentence under "Site Preparation".
12. Section 10.4. Spelling of "kikuya grass" changed to "kikuyugrass" according to WSSA.
13. Section 11.0, spelling of word "burcumber" corrected to "burcucumber".
14. Sections 11.1 and 11.4, California statement above boxed table: second occurrence of word "approved" changed to "accepted" based on the wording agreed with CDPR.
15. Section 11.1 Monsanto has voluntarily reduced the use rates over-the-top of canola in several places. Approved application rates based on submitted residue studies exceed those presently necessary in the marketplace for weed control.
16. Section 11.2, Preplant, Preemergence, At-Planting subsection; TANK MIXTURES paragraph, 1st sentence: added missing word "rate" after "labeled" for clarity.
17. Section 11.3 Cotton, Salvage Treatment: Monsanto has voluntarily reduced the approved 1 quart per acre rate to 22 fluid ounces per acre to reduce the potential for crop injury.
18. Section 11.4, California statement above boxed table: The cut-and-paste erroneous inclusion of the word "canola" was corrected to the intended word "soybeans".

Mr. Tompkins
3-Jun-02

19. Section 14.0, PERENNIAL WEEDS RATE TABLE. Under "Bindweed, field" comments, substitute the word "bindweed" for the word "weeds" for added clarity.
20. Section 15, WOODY BRUSH AND TREES RATE TABLE, subheading "(Alphabetically by Species)" added to match other weed rate table format.
21. Section 15.0, WOODY BRUSH AND TREES RATE TABLE. Under "Eucalyptus" comments, insert the word "eucalyptus" in the final sentence for added clarity.
22. The trademark references were edited slightly to properly reference brand names mentioned in the printed text.

Mr. Tompkins
3-Jun-02

B. Minor differences between 11-Apr-2002 Master Label approval and Final Printed California Aerial Supplemental.

1. The label is based on Part II of the Master Label – Supplemental Labeling for Crops – Sections F and G, combined with Part IV – Supplemental Labeling for Industrial, Turf, and Ornamental – Section C.
2. California Department of Pesticide Regulation has requested that Monsanto combine these supplemental labeling instructions in to a single document.
3. "Roundup WEATHERMAX Herbicide" and "524-537" substituted for placeholder text throughout.
4. The headers "Part I – Crop Uses" and "Part II – Crop Uses" were added to segment the text derived from the two places described in point 1 above.
5. Text that was common to both crop and non-crop uses was moved to the beginning of the label prior to "Part 1 – Crop uses".
6. Point 5 on page 2 of the printed supplemental label is brought forward from "Part II - Non-crop uses".
7. In the table on page 2, the words "per acre" were added after the "22 fluid ounces" and "44 fluid ounces" headings to correct an inadvertent omission in the stamped label text.
8. Cross-reference statements in the Fresno Section referring to the California aerial supplemental label were changed, since both now occur in one document.
9. Point 1 in the stamped non-crop aerial label (ie., Part IV, Section C), referring to preemergence treatments in labeled crops, was omitted, since the entire "Part I Crop Uses" describes allowed crop uses and is already included in the same document.



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

288005

Application for Pesticide - Section I

1. Company/Product Number 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Roundup WEATHERMAX Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated <u>11-Apr-2002</u>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of final printed labels

Section - III

1. Material This Product Will Be Packaged in:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____		
Certification must be submitted If "Yes" Unit Packaging wgt. _____ No. per container _____ If "Yes" Package wgt. _____ No. per container _____					
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Dr. Marsha Gray	Title Product Registration Manager	Telephone No. (include Area Code) (202) 783-2460	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			8. Date Application Received (Stamped) <div style="text-align: right; font-size: 2em;">131</div>
2. Signature 	3. Title Manager, Registrations		
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date June 3, 2002		

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

132

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™
HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS
CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WEATHERMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



NOT REVIEWED
In Accordance with PR Notice 83-11
Based on Draft Labeling Dated
4/11/02

EPA Reg. No. 524-537

Roundup WEATHERMAX and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR AERIAL APPLICATION IN ARKANSAS ONLY.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product
in any manner inconsistent with its labeling.

This labeling must be in the possession of the
user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE,
GREEN STEMS, EXPOSED NON-WOODY ROOTS

OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

USE DIRECTIONS

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the recommended rate of this product in 3 to 15 gallons of water per acre.

Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range are recommended.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety.

The distance of the outermost nozzles on the boom must not exceed 75 percent of the length of the wingspan or rotor. In many cases, reducing this distance to 65 percent of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge. Do not apply this product when winds are in excess of 10 miles per hour.

Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 miles per hour.

Use the following guidelines when applications are made near crops or other desirable vegetation:

1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WEATHERMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

4/11/02

63003A1-12

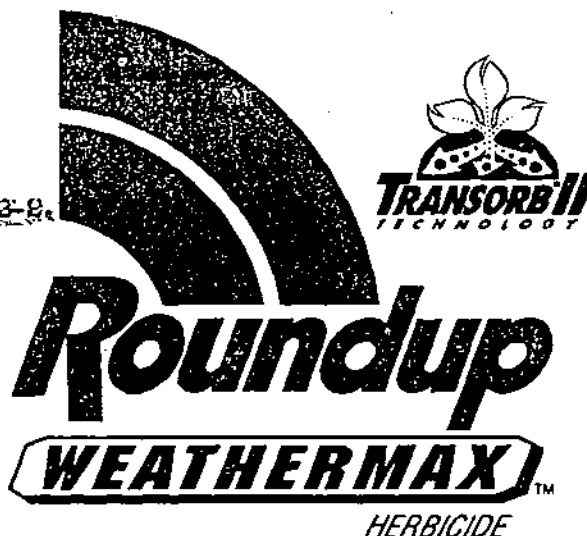
SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR ROUNDUP WEATHERMAX™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using Roundup WEATHERMAX herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

NOT REVIEWED
Accordance with PR Notice 88-9
Based on Draft Labeling Dated

4/11/02



EPA Reg. No. 524-537

Roundup WEATHERMAX and Roundup Ready are trademarks of Monsanto Technology LLC.
Garlon™ is a trademark of Dow AgroSciences, LLC.

FOR AERIAL APPLICATION IN CALIFORNIA ONLY
(including Fresno county, California)

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

135

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

AVOID DRIFT—DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops:

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.
5. **APPLY BY AIR ONLY TO NONRESIDENTIAL AREAS.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application—To avoid streaking, uneven, or over-lapped application, use appropriate marking devices. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic

coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

PART I. CROP USES:

Aerial applications of this product are allowed in the following situations:

1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
2. In alfalfa and pasture renovation applications.
3. Over-the-top applications in Roundup Ready corn and cotton. Refer to further label instructions for Roundup Ready corn and Roundup Ready cotton for specific application instructions for over-the-top applications in these crops.
3. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready corn and Roundup Ready cotton. Refer to the Roundup WEATHERMAX herbicide label instructions for Roundup Ready corn and Roundup Ready cotton, for each individual crop.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

Use the recommended rates of this product in 3 to 15 gallons of water per acre.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED THE FOLLOWING MAXIMUM RATES WHEN MAKING APPLICATIONS BY AIR:

22 fluid ounces per acre	44 fluid ounces per acre
	Alfalfa
Corn	
Roundup Ready® Corn	
	Cotton
	Roundup Ready® Cotton
	Fallow
	Reduced Tillage Systems
	Pastures
Wheat	

For FRESNO COUNTY, CALIFORNIA ONLY
(From February 15 through March 31 only)
the following applies:

Applicable Area

This section only applies to the area contained inside the following boundaries within Fresno County, California:

North: Fresno County line
South: Fresno County line
East: State Highway 99
West: Fresno County line

General Information

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Recommendations

A written recommendation **MUST** be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation **MUST** state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night—Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of this product, call
1-800-332-3111.

For additional information on the proper aerial application of this product, call 916-784-1718.

Note: For aerial application from April 1 through February 14, refer to the other sections of this supplemental label.

PART II. NONCROP USES:

Aerial applications of this product are allowed in the following situations:

1. Aid to burning for establishment and maintenance of fuel breaks
2. Establishing fire perimeters and black lines
3. Aid to prescribed burning
4. Along fire roads
5. Range conversion
6. Habitat restoration and management
7. Wildlife food plots

Apply 1 to 5 quarts of this product in 5 to 15 gallons of water per acre using aerial (helicopter only) applications.

To broaden the spectrum of control, Garlon™ 4 may be tank mixed with this product at the rate of 0.5 to 2 quarts per acre. The rate of Garlon should not exceed 1/2 the rate of this product (e.g. 1 quart of Garlon to 2 quarts of this product) for best results.

Read the "Limit of Warranty and Liability" in the label booklet for Roundup WEATHERMAX herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

4/11/02

63003A1-13

131

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin or clothing. Avoid breathing vapor or spray mist.

FIRST AID: Call a poison control center or doctor for treatment advice.	
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.
IF ON SKIN	• Remove contact lenses if present after the first 5 minutes then continue rinsing eye. • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes.
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
• Have the product container or label with you when calling a poison control center or doctor, or going for treatment. • You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information. • This product is identified as Roundup WeatherMAX herbicide, EPA Reg. No. 524-537.	

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.



AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many cropping systems, farmsteads and Conservation Reserve Program acres.

Carefully follow detailed instructions in label booklet.

Read the entire label before using this product.

Use only according to label instructions.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement, which appears in the label booklet, before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

Keep out of reach of children.

CAUTION!

ACTIVE INGREDIENT:

Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt	48.8%
OTHER INGREDIENTS:	51.2%
	100.0%

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,688,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

U.S. Pat. No. 524-537

EPA Est. (L) 524-LA-1

EPA Est. (M) 524-1A-1

Lot number prefix L or M indicates appropriate establishment number.

Roundup WeatherMAX, Roundup Ready, and Transorb are trademarks of Monsanto Technology LLC.

©2002 MONSANTO COMPANY

ST. LOUIS, MISSOURI 63167

For more product information, call toll-free 1-800-332-3111.

G3003A1-4/53X2

NET 30 GAL

Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers. DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTION OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury. If ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

Empty container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(See label booklet for Complete Directions for Use.)

NOT RECALLED
In accordance with FR Notice 82-28
Based on Draft Labeling dated 4/1/02

63003A1-1/53



Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE,
GREEN STEMS, EXPOSED NON-WOODY ROOTS OR
FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR
INDIVIDUAL ROUNDUP READY® CROPS).
DESIRABLE PLANTS AND TREES, BECAUSE SEVERE
INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup
Ready crops. Non-selective, broad-spectrum weed
control for many cropping systems, farmsteads
and Conservation Reserve Program acres.



63003A1-1/53



Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE,
GREEN STEMS, EXPOSED NON-WOODY ROOTS OR
FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR
INDIVIDUAL ROUNDUP READY® CROPS),
DESIRABLE PLANTS AND TREES, BECAUSE SEVERE
INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup
Ready crops. Non-selective, broad-spectrum weed
control for many cropping systems, farmsteads
and Conservation Reserve Program acres.

CONTENTS

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Read the entire label before using this product.

Use only according to label instructions.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

CONTENTS

1	1.0	INGREDIENTS	5
2	2.0	IMPORTANT PHONE NUMBERS	5
3	3.0	PRECAUTIONARY STATEMENTS	6
	3.1	Hazards to Humans and Domestic Animals	6
	3.2	Environmental Hazards	8
	3.3	Physical or Chemical Hazards	8
4	4.0	STORAGE AND DISPOSAL	10
5	5.0	GENERAL INFORMATION (How This Product Works)	10
6	6.0	MIXING	13
	6.1	Mixing with Water	13
	6.2	Tank Mixing Procedure	14
	6.3	Mixing for Hand-Held Sprayers	15
	6.4	Ammonium Sulfate	15
	6.5	Colorants or Dyes	16
	6.6	Drift Control Additives	16

7	7.0	APPLICATION EQUIPMENT AND TECHNIQUES	16
	7.1	Aerial Equipment	17
	7.2	Ground Broadcast Equipment	21
	7.3	Hand-Held or High-Volume Equipment	21
	7.4	Selective Equipment	22
	7.5	Injection Systems	25
	7.6	CDA Equipment	25
8	8.0	ANNUAL AND PERENNIAL CROPS (Alphabetical)	26
	8.1	Cereal and Grain Crops	28
	8.2	Corn	30
	8.3	Cotton	33
	8.4	Fallow Systems	34
	8.5	Grain Sorghum (Milo)	36
	8.6	Herbs and Spices	39
	8.7	Oil Seed Crops	40
	8.8	Soybeans	41
	8.9	Sugarcane	43
	8.10	Vegetable Crops	45
	8.11	Miscellaneous Crops	49
9	9.0	TREE, VINE, AND SHRUB CROPS (Alphabetical)	51
	9.1	Berry Crops	56
	9.2	Citrus	58
	9.3	Miscellaneous Tree Food Crops	59
	9.4	Non-Food Tree Crops	59
	9.5	Pome Fruit	59
	9.6	Stone Fruit	60
	9.7	Tree Nuts	60
	9.8	Tropical and Subtropical Trees and Fruits	61
	9.9	Vine Crops	62

CONTENTS

CONTENTS

10	10.0 PASTURE GRASSES, FORAGE LEGUMES, AND RANGELANDS	63
10.1	Alfalfa, Clover, and Other Forage Legumes	63
10.2	Conservation Reserve Program (CRP)	65
10.3	Grass Seed Production	66
10.4	Pastures	68
10.5	Rangelands	69
10.6	Turf Grass Sod Production	70
11	11.0 ROUNDUP READY CROPS	70
11.1	Canola with the Roundup Ready Gene	73
11.2	Corn with the Roundup Ready Gene	75
11.3	Cotton with the Roundup Ready Gene	78
11.4	Soybeans with the Roundup Ready Gene	81
11.5	Sugar Beets with the Roundup Ready Gene	84
12	12.0 NONCROP USES AROUND THE FARMSTEAD	85
12.1	General Weed Control and Trim-And-Edge	85
12.2	Greenhouse/Shadehouse	86
12.3	Chemical Mowing	86
12.4	Cut Stumps	87
12.5	Habitat Management	88
13	13.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species)	88
13.1	Annual Weeds—Rates for 10 to 40 GPA	93
13.2	Annual Weeds—Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K	93
13.3	Annual Weeds—Hand-Held or High-Volume Equipment	94
13.4	Annual Weeds—Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems	94
14	14.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)	95

15	15.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species)	105
16	16.0 LIMIT OF WARRANTY AND LIABILITY	109

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt

OTHER INGREDIENTS:

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,688,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 1-800-332-3111.

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000.

INGREDIENTS

142

PRECAUTIONARY STATEMENTS

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

FIRST AID:	Call a poison control center or doctor for treatment advice.
IF IN EYES	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15-20 minutes.• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.
IF ON SKIN	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as **Roundup WEATHERMAX™** herbicide, EPA Registration No. 524-537. You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

PRECAUTIONARY STATEMENTS 7

143

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses; and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks and chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater composed of materials such as butyl rubber, natural rubber-neoprene rubber, or nitrile rubber.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

144

4.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

See container label for STORAGE AND DISPOSAL instructions.

5.0 GENERAL INFORMATION (How this product works)

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when Roundup WEATHERMAX herbicide is the only pesticide used unless otherwise directed. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of this label for instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4

days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" for recommendations for specific weeds.

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds with disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds under poor growing conditions or that are heavily covered with dust.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germi-

145

nating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5.3 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

6.0 MIXING

Use the following conversion table to help determine application rates of Roundup WEATHERMAX herbicide based on commonly used rates of Roundup Original™ and Roundup UltraMAX™ herbicides.

NOW EVEN MORE CONCENTRATED		
Roundup WEATHERMAX CONVERSION TABLE		
Roundup WEATHERMAX (Ounces)	Roundup UltraMAX (Ounces)	Roundup Original (Ounces)
16	20	24
22	26	32
27	32	40
32	40	48

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or mini-

146

minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle,

thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Desired Volume	Amount of Roundup WEATHERMAX					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	1 oz	1.3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.7 qt	1 qt	1.5 qt	4 qt	7 qt
100 gal	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank

147

MIXING

mixed with certain residual herbicides, on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

6.5 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's recommendations.

6.6 Drift Control Additives

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial—Fixed Wing and Helicopter

Ground Broadcast Spray—Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment—Knapsack and backpack sprayers, pump-up pressure sprayers, hand-guns, handwands, mistblowers*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment—Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems—Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA)—Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 22 fluid ounces per acre. Refer to the individual use area sections of this label for recommended volumes, application rates, and further instructions.

FOR AERIAL APPLICATION IN CALIFORNIA OR SPECIFIC COUNTIES THEREIN, OR IN ARKANSAS, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATION.

TIONS IN THAT STATE OR COUNTY FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

This product plus dicamba tank mixtures may not be applied by air in California.

Ensure uniform application—To avoid streaked, uneven or overlapped application, use appropriate marking devices.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed $3/4$ the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the "Wind", "Temperature and Humidity", and "Temperature Inversions" sections of this label).

Controlling Droplet Size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom length:** For some use patterns, reducing the effective boom length to less than $3/4$ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 miles per hour due to variable wind direction and high inversion

149

potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The product should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid direct application to any body of water.

Aircraft Maintenance

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

7.2 Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "ANNUAL WEEDS—HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of this product label.

7.4 Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on this label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Recirculating Spray System

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Shielded and Hooded Applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. A single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Spray volume should be 20-30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.
- Leave at least an 8-inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

Wiper Applicators

When applied under the conditions described in the following paragraphs, this product **CONTROLS** many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, spanishneedles and bristly starbur; and **SUPPRESSES** many weeds including Florida beggarweed, Bermudagrass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, velvetleaf.

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to

ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators—Solutions ranging from 33 to 75 percent of this product in water may be used. Apply this solution to weeds listed above in this section.

For Panel Applicators—Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

7.6 CDA Equipment

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast

152

CROPS equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1 quart per acre). For the control of perennial weeds, apply a 20 to 30 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 miles per hour (2 to 3 quarts per acre).

Controlled droplet application equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN SECTION 8 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label or separately published Monsanto Supplemental Labeling for instructions for treating Roundup Ready crops.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applicators in Row-Middles, and Post-Harvest treatments.

GENERAL USE INSTRUCTIONS:

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or pre-

emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" in this label. Repeat applications may be made up to a maximum of 5.3 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless otherwise specified in

this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

8.1 Cereal and Grain Crops

LABELED CROPS: Barley, Buckwheat, Millet (pearl, proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all types), Wild Rice.

PRECAUTIONS, RESTRICTIONS: Do not treat rice fields or levees when field contains water.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Wiper Applications Over-the-Top (Feed Barley and Wheat only), Preharvest (Feed Barley and Wheat only).

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

Red Rice Control Prior to Planting Rice

USE INSTRUCTIONS: Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red

rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

PRECAUTIONS, RESTRICTIONS: Avoid spraying during low humidity conditions, as reduced control may result. Do not treat rice fields or levees when the fields contain floodwater. Do not re-flood treated fields for 8 days following application.

Spot Treatment (except Rice)

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Wiper Applications Over-the-Top (Feed Barley and Wheat only)

USE INSTRUCTIONS: Wiper applications may be used in feed barley and wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, and when the rye is at least 6 inches above the wheat crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applicators.

Preharvest (Feed Barley and Wheat only)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. Stubble may be grazed immediately after harvest.

154

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.2 Corn

TYPES OF CORN: Field Corn, Seed Corn, Silage Corn, Sweet Corn and Popcorn.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest.

For Roundup Ready corn, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D	Frontier™/Outlook™
Aim™	FulTime™
Atrazine	Guardsman™/Leadoff™
Axiom™	Harness®
Balance™	Harness Xtra
Banvel™/Clarity™	Harness Xtra 5.6L
Bicep MAGNUM™	Lariat®
Bicep II MAGNUM™	Lasso®/Alachlor
Bullet®	Linex™/Lorox™
Degree™	Marksman™
Degree Xtra™	Micro-Tech®
Distinct™	Prowl™
Dual MAGNUM™	Python™
Dual II MAGNUM™	Simazine
Epic™	TopNotch™

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this recommendation includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS, RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fluid ounces of this product per acre for each application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 Cotton

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Selective Equipment, Spot Treatment, Preharvest.

For Roundup Ready cotton, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

Hooded Sprayer, Selective Equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to boll opening of cotton.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop

receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" sections of this label. For cotton regrowth inhibition, apply 11 to 44 fluid ounces of this product per acre.

Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank mixed with DEFTTM 6, FolexTM, Ginstar, or PrepTM to provide additional enhancement of cotton leaf drop.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

8.4 Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Aid-to-Tillage.

Chemical Fallow

USE INSTRUCTIONS: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute

for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting. Do not apply dicamba tank mixtures by air in California.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba is applied within 45 days of planting.

Preplant Fallow Beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product will control weeds listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" sections of this label.

TANK MIXTURES: In addition, 8 fluid ounces of this product plus 2 to 3 fluid ounces of GoalTM 2XL per acre will control the following weeds with the maximum height or length indicated: 3 inches—common cheeseweed, chickweed, groundsel; 6 inches—London rocket, shepherd's-purse.

11 fluid ounces of this product plus 2 to 3 fluid ounces of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 6 inches—common cheeseweed, groundsel, mare's tail (*Coryza canadensis*), 12 inches—chickweed, London rocket, shepherd's-purse.

Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS, RESTRICTIONS: Tank mixtures with residual herbicides may result in reduced performance.

8.5 Grain Sorghum (Milo)

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications, Preharvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tank-mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

Atrazine	Lariat
Bicep II MAGNUM	Lasso
Bullet	Micro-Tech
Dual II MAGNUM	

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre

in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

Spot Treatment, Over-the-Top Wiper Applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this label.

PRECAUTIONS, RESTRICTIONS: For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

PRECAUTIONS, RESTRICTIONS: Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 22 fluid ounces of this product per acre per application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Preharvest

USE INSTRUCTIONS: Make applications at 30 percent grain moisture or less.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 Herbs and Spices

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Curmin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fenel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Over-the-Top Wiper Applications (Peppermint and Spearmint only), Spot Treatments (Peppermint and Spearmint only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system.

Over-the-Top Wiper Applications. Spot Treatments (Peppermint and Spearmint only)

USE INSTRUCTIONS: This product may be used as a spot treatment or wiper application in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. In wiper applications, the applicator should be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10 percent of the total field area to be harvested should be treated at one time. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason. In wiper applications, contact of the herbicide solution with the crop may result in damage or destruction.

8.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

For Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATIONS: Those listed in Section 8.0.

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops. Broadcast applications must be made prior to emergence of the listed oil seed crops. Wiper applicators or hooded sprayers may be used between the rows once the crop is established.

TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre on canola. Do not apply more than 22 fluid ounces of this product per acre for sunflowers as a single preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

8.8 Soybeans

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest, Selective Equipment.

For Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water per acre.

Aim™
Amplify™
Assure II™
Authority™
Boundary™
Canopy™
Canopy XL™
Command™
Command Xtra™
Domain™
Dual MAGNUM

Dual II MAGNUM
Firstate™
Flexstar™
Frontier™/Outlook™
Fusion™
Gauntlet™
Lasso
Linex™
Lorox/Linuron
Lorox Plus™
Micro-Tech

Prowl
Pursuit™
Pursuit Plus
Rellex™
Scepter™

Sencor™/Lexone™
Squadron™
Steel™
Valor™

This product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: Tank-mixtures with some of the above listed herbicides may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES".

This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 3.3 quarts per acre of this product for preharvest applications. Do not apply more than 44 fluid ounces per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

Selective Equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

8.9 Sugarcane

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus Spot Treatment.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.

PRECAUTIONS, RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

PRECAUTIONS, RESTRICTIONS: Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

Fallow Treatments

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 2.5 to 3.3 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Ground or aerial application equipment may be used. Applications up to 64 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of sugarcane. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

PRECAUTIONS, RESTRICTIONS: Do not allow treated weeds to come into contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

8.10 Vegetable Crops

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, and Post-Harvest, Directed Applications (non-bearing Ginseng), Over-the-Top Wipers (Rutabagas only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this

product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

8.10.1 Brassica Vegetables

LABELED CROPS: Broccoli, Chinese broccoli (gai lan), Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens.

8.10.2 Bulb Vegetables

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot.

8.10.3 Cucurbit Vegetables and Fruits

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Melons (all), *Momordica* spp (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ball melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon.

PRECAUTIONS, RESTRICTIONS: For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all), Muskmelon, Persian melon, Pumpkin, Squash (summer, winter), and Watermelon, allow at least 3 days between application and planting.

8.10.4 Leafy Vegetables

LABELED CROPS: Amaranth (Chinese spinach), Arugula (rocket), Beet greens, Cardoon, Celery, Chinese celery, Celtuce, Chaya, Chervil, Edible-leaved chrysanthemum, Garland chrysanthemum, Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Vine spinach, Swiss chard, Watercress (upland), Water spinach.

PRECAUTIONS, RESTRICTIONS: For Watercress, avoid applications within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.

8.10.5 Fruiting Vegetables

LABELED CROPS: Eggplant, Groundcherry (*Physalis* spp), Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato.

PRECAUTIONS, RESTRICTIONS: For Eggplant, Groundcherry, Pepper (all), and Tomatillo, allow at least 3 days between application and planting. For Tomato, do not make hooded or shielded sprayer applications in row middles because of the potential for crop injury.

8.10.6 Legume Vegetables (succulent or dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin). Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean). Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeye pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean). Broad bean (fava). Chickpea (garbanzo). Guar. Jackbean. Lablab bean. Lentil. Pea (*Pisum*: includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea). Pigeon pea. Soybean (immature seed). Sword bean.

8.10.7 Root and Tuber Vegetables

LABELED CROPS: Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Beet (garden). Burdock, Canna, Carrot, Cassava (bitter and sweet). Celeriac, Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Galangal, Ginger, Ginseng, Horseradish, Leren, Kava (turnip-rooted), Parsley (turnip-rooted), Parsnip, Potato, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Skirret, Sweet potato, Tanier, Turmeric, Turnip, Wasabi, Yacon, Yam bean, True yam.

Directed Applications (Non-bearing Ginseng only)

USE INSTRUCTIONS: This product may be used for general weed control in established non-bearing ginseng. Applications may be made with boom equipment, COA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.

PRECAUTIONS, RESTRICTIONS: Direct applications so that there is no contact of this product with the ginseng plant. Applications must be made at least one year prior to harvest.

Over-the-Top Wiper Applications (Rutabagas only)

USE INSTRUCTIONS: Wiper applicators may be used over-the-top of rutabagas.

PRECAUTIONS, RESTRICTIONS: Allow at least 14 days between application and harvest of rutabagas.

8.11 Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: General Weed Control, Site Preparation, Spot Treatment (Asparagus).

For Roundup Ready sugar beets, see the "ROUNDUP READY CROPS" section of this label.

PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See

"APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

General Weed Control, Site Preparation

USE INSTRUCTIONS: This product may be applied for general weed control or for site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

Spot Treatment (Asparagus)

USE INSTRUCTIONS: This product may be applied immediately after cutting, but prior to the emergence of new spears.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

Post-Harvest (Asparagus)

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS, RESTRICTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select

and use recommended types of spray equipment for post-emergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

9.0 TREE, VINE, AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE, AND SHRUB CROPS WITHIN SECTION 9 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles (between rows of trees, vines or bushes), Strips (within rows of trees, vines or bushes), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, COA equipment, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

GENERAL USE INSTRUCTIONS: This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for general weed control or perennial grass suppression in established tree fruit and nut groves, orchards, berries, and vineyards. It may also be used for site preparation prior to planting or transplanting these crops. Apply 11 fluid ounces to 3.3 quarts per acre according to the "ANNUAL WEEDS" and "PERENNIAL WEEDS

145

TREE AND VINE CROPS

RATE TABLES" sections of this label. Utilize rates at the higher end of the recommended rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS: Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) should be used to minimize the potential for leakage or drift of herbicide sprays onto crop. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wipers or shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

Allow a minimum of 3 days between application and transplanting.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

TANK MIXTURES: A tank mixture of this product plus Goal 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, lilaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control common cheeseweed (malva) or hairy fleabane with a maximum height or diameter of 3 inches.

Strips (in rows)

TANK MIXTURES: This product may be applied in rows of tree or vine crops in tank mixtures with the following products:

Devrinol™ 50 DF
Direx™ 4L
Goal 2XL
Karmex™ DF
Krovar I
Provil
Princep Caliber™ 90

Simazine 4L
Simazine 80W
Sim-Trol™ 4L
Solfican™ DF
Surflan™ AS
Surflan 75W

Do not apply these tank mixtures in Puerto Rico.

TREE AND VINE CROPS

53

Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial Grass Suppression

This product will suppress perennial grasses such as bahia-grass, Bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 22 to 44 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4 to 11 fluid ounces of this product per acre east of the Rocky Mountains

and 11 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4 to 7 fluid ounces of this product per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

Cut Stump

USE INSTRUCTIONS: Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tanger.

Fruit Trees: Apple, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio, Walnut (black, English).

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

PRECAUTIONS, RESTRICTIONS: DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT

107

DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP, INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

9.1 Berry Crops

LABELED CROPS: Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Salal.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Spot Treatment in Cranberry Production and Post-Harvest Treatments in Cranberry Production.

PRECAUTIONS, RESTRICTIONS: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes, or foliage. Allow a minimum of 30 days between last application and harvest in cranberries. Allow a minimum of 14 days between last application and harvest in other berry crops. Do not make directed sprays within the cranberry bush areas prior to berry harvest.

Spot Treatment in Cranberry Production

USE INSTRUCTIONS: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be

used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 1.5 percent solution of this product. Spray to wet vegetation, not to run-off.

PRECAUTIONS, RESTRICTIONS: For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium- to large-sized droplets to minimize drift in order to avoid crop injury.

Post-Harvest Treatments in Cranberry Production

USE INSTRUCTIONS: Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.4 to 0.7 percent solution of this product. Spray to wet vegetation, not to run-off. If using hand-held boom sprayers, apply 44 to 86 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Make applications only after cranberries have been harvested. Do not treat more than 10 percent of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

9.2 Citrus

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (all), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: (The recommendations below pertain to applications in Florida and Texas):

For burndown or control of the weeds listed below, apply the recommended rates of this product in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

For goatweed, apply 44 to 64 fluid ounces of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 44 fluid ounces per acre when plants are less than 8 inches tall and 64 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of KrovatTM I or KarmexTM may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial weeds:

S = Suppression B = Burndown
PC = Partial control C = Control

WEED SPECIES	Roundup WEATHERMAX RATE PER ACRE			
	0.7 QT	1.3 QT	2 QT	3.3 QT
Bermudagrass	B	—	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	—	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	—	PC	C

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in citrus crops. For citrus groves, apply as directed sprays only.

9.3 Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil).

TYPES OF APPLICATIONS: Those listed in Section 9.0.

9.4 Non-food Tree Crops

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other non-food tree crops.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

Directed Sprays, Spot Treatment, Wipers

USE INSTRUCTIONS: This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

PRECAUTIONS, RESTRICTIONS: Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. **THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.**

Site Preparation

USE INSTRUCTIONS: This product may be used prior to planting.

PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect nontarget plants during site preparation applications.

9.5 Pome Fruit

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince.

169

10.3 Grass Seed Production

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS"

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Shielded Sprayers, Wiper Applications, Spot Treatments, Creating Rows in Annual Ryegrass.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production. Applications must be made prior to the emergence of the crop to avoid crop injury. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.

PRECAUTIONS, RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical moving, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

Do not feed or graze treated areas for 8 weeks following application.

Shielded Sprayers

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.

PRECAUTIONS, RESTRICTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications

PRECAUTIONS, RESTRICTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

Spot Treatments

USE INSTRUCTIONS: Use a 1 percent solution.

PRECAUTIONS, RESTRICTIONS: Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field area. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 11 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS, RESTRICTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray lines, or drift to contact the rye-

grass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

Grower assumes all responsibility for crop losses from misapplication.

10.4 Pastures

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS", including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guinea grass, Kikuyugrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

TYPES OF APPLICATIONS: Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Application.

Preplant, Preemergence, Pasture Renovation

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Spot Treatment, Wiper Application

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total pasture area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

10.5 Rangelands

TYPES OF APPLICATIONS: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Postemergence

USE INSTRUCTIONS: Apply 8 to 11 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 11 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

PRECAUTIONS, RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product.

176

Do not make more than one application per year.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

10.6 Turf Grass Sod Production

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Spot Treatment.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for seed or sod. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. For warm-season grasses such as Bermuda-grass, summer or fall applications provide the best control.

Desirable turf grasses may be planted following the above procedures.

PRECAUTIONS, RESTRICTIONS: Do not feed or graze turf grass grown for seed or sod production for 8 weeks following application.

Spot Treatment

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Monsanto Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops

during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to crop varieties that are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain the Roundup Ready gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier or Monsanto representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready crop by applying glyphosate to the weeds and Roundup Ready crop are protected under several U.S. Patents, including 5,352,605 and 5,633,435. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing the Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing the Roundup Ready trait cannot be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

172

Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre as a preharvest treatment. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot Treatment or Wiper Applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applications" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover,

and other labeled forage legumes. Labeled crops may be planted into the treated area.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application. If application rates of 44 fluid ounces per acre or less are used wait 36 hours after application before grazing or harvesting. If application rates greater than 44 fluid ounces per acre are used, wait 8 weeks between applications and grazing or harvesting.

10.2 Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications.

Renovation (rotating out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.

Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in pome crops.

9.6 Stone Fruit

LABELED CROPS: Apricot, Cherry (sweet, tart), Nectarine, Olive, Peach, Plum/Prune (all types), Plumcot.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

Restrictions on Application Equipment

For cherries, any application equipment listed in Section 9.0 may be used in all states.

Any application equipment listed in Section 9.0 may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states, use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. **EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.**

9.7 Tree Nuts

LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (black, English)

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconut.

9.8 Tropical and Subtropical Trees and Fruits

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Hama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Bananacide (banana only).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya, and plantain crops. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

174

Bananacide (Banana only)

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 0.5 fluid ounce (15 mL) of this product's concentrate per mat (or unit). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for general weed control.

9.9 Vine Crops

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: Applications should not be made when green shoots, canes or foliage are in the spray zone.

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest in vine crops. Do not use selective equipment in kiwi.

10.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

10.1 Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-Planting, Preharvest (Alfalfa only), Spot Treatment or Wiper Applications (Alfalfa and Clover only), Renovation.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: If a single application is made at rates of 44 fluid ounces per acre or less, no waiting period between treatment and feeding or grazing is required. If applications rates greater than 44 fluid ounces per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

175

ROUNDUP READY CROPS

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For aerial applications, apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

For proper stewardship of aerial applications over-the-top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide "A Guide to On-Target Aerial Application" available by calling 1-800-ROUNDUP (1-800-768-6387) or on the internet at www.FARM-SOURCE.com.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

See the "MIXING" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise noted in this product label, supplemental labeling or fact sheets published separately by Monsanto.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 Canola with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY CANOLA MAY NOT BE PRACTICED

ROUNDUP READY CROPS 74

IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Preplant, At-planting, Preemergence applications	44 fluid ounces per acre
Total in-crop application from emergence to 6-leaf stage	22 fluid ounces per acre

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting canola.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Weeds Controlled: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

Single Application—Apply 11 to 16 fluid ounces per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and/or growth reduction. Similar injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

Sequential Application—Apply 11 fluid ounces per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as

Canada thistle and quackgrass or when controlling weeds with multiple application times.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 22 fluid ounces per acre. Allow a minimum of 60 days between last application and canola harvest.

11.2 Corn with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (in-crop), Spot Treatment, Preharvest, Post-Harvest.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	44 fluid ounces per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	22 fluid ounces per acre

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn.

177

ROUNDUP READY CROPS 76

TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

NOTE: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above.

Postemergence (in-crop)

USE (INSTRUCTIONS): This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The postemergent application of 16 to 22 fluid ounces per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 16 to 22 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit[®] and atrazine at labeled rates. Refer to the speci-

fic product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

Tank-Mix Partner	Maximum Height of Corn For Application
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6 L	11 inches
Bullet* Micro-Tech*	5 inches
Permit	30 inches
atrazine	12 inches

*Bullet and Micro-Tech are not registered for use as a post-emergence application in Texas.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Single in-crop applications of this product are not to exceed 22 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 44 fluid ounces per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

Preharvest

USE INSTRUCTIONS: In Roundup Ready corn, up to 22 fluid ounces per acre of this product can be applied preharvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

ROUNDUP READY CROPS

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

11.3 Cotton with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Over-the-Top, Selective Equipment, Preharvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to layby	2.5 quarts per acre
Maximum preharvest application rate	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 4 quarts per acre. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN TWO

APPLICATIONS SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton.

Over-the-Top

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to 22 fluid ounces per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

Salvage Treatment. This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 22 fluid ounces per acre of this product may be applied either as an over-the-top application or as a post-directed treatment sprayed higher on the cotton plants and over the weeds. **NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.**

NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

179

Selective Equipment

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fluid ounces per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Preharvest

USE INSTRUCTIONS: This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH

THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

11.4 Soybeans with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence, Preharvest, Post-Harvest.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from cracking throughout flowering	64 fluid ounces per acre
Maximum preharvest application rate	22 fluid ounces per acre

PRECAUTIONS/RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting soybeans.

Postemergence

USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate recommendations for specific annual weeds. In general, an initial application of 22 fluid ounces per acre on 2 to 8 inch tall weeds is recommended. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 44 fluid ounces per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

A 22- to 44-fluid-ounce per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP. To control giant ragweed, it is recommended that 22 fluid ounces per acre of this product be applied when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

PRECAUTIONS, RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering is 44 fluid ounces per acre.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans. Up to 22 fluid ounces per acre of this product can be applied by aerial or ground application.

PRECAUTIONS, RESTRICTIONS: Care should be taken to avoid excessive seed shatter loss due to ground application equipment. Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

11.5 Sugar Beets with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Emergence to 8-leaf stage	56 fluid ounces per acre
Between 8-leaf stage and canopy closure	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces per acre. Allow a minimum of 30 days between last application and sugar beet harvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready sugar beets.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergent over-the-top to Roundup Ready sugar beets from emergence to 30 days prior to harvest. To maximize yield potential spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. Refer to

the "ANNUAL WEEDS RATE TABLES" in this label for rate recommendations for specific annual weeds. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

12.0 NONCROP USES AROUND THE FARMSTEAD

TYPES OF APPLICATIONS: General Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stumps, Habitat Management.

12.1 General Weed Control and Trim-and-Edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

TANK MIXTURES: This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and 44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS—HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for recommended rates.

182

Arsenal	Plateau
Banvel/Clarity	Princep DF
Barricade™ 65WG	Princep Liquid
Diuron	Ronstar 50 WP
Endurance™	Sahara
Escort™	Simazine
Karmex DF	Surflan
Krovar I DF	Telar™
Ousi™	Vanquish™
Pendulum 3.3 EC	2,4-D
Pendulum WDG	

This product plus dicamba tank mixtures may not be applied by air in California.

12.2 Greenhouse/ Shadehouse

This product may be used to control weeds in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

12.3 Chemical Mowing

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 11 fluid ounces of this product per acre when treating Bermuda-grass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

PRECAUTIONS, RESTRICTIONS: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 Cut Stumps

TYPES OF APPLICATION: Treating cut stumps in any non-crop site listed on this label

USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion

Alder	Reed, giant
Eucalyptus	Saltcedar
Madrone	Sweetgum
Oak	Tan oak
Pepper, Brazilian	Willow
Pine, Austrian	

PRECAUTIONS, RESTRICTIONS: Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

12.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance, Wildlife Food Plots.

Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.

Wildlife Food Plots

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

13.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species)

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE RECOMMENDED.

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 32 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

WEED SPECIES	RATE (fluid ounces per acre)				
	11	16	22	27	32
	Maximum height/length (in inches)				
Ammannia, purple	3	6	12	-	18
Annoda, spurred	-	2	3	5	8
Barley, ^{1,2}	10	18	-	-	-
Barnyardgrass	-	3	6	7	9
Bassia, livehook	-	-	5	6	-
Beggarweed, Florida	-	5	8	-	-
Bittercress, ²	12	20	-	-	-
Bluegrass, annual	10	-	-	-	-
Bluegrass, bulbous	6	-	-	-	-
Brome, downy ^{1,2}	6	12	-	-	-
Brome, Japanese	6	12	24	-	-
Browntop panicum	6	8	12	-	24
Buckwheat, wild ³	-	1	2	-	-
Burcucumber	-	6	12	-	18
Buttercup	12	20	-	-	-
Carolina geranium	-	-	4	-	9
Carpetweed	-	6	12	-	-
Cheat ²	6	20	-	-	-
Chervil	20	-	-	-	-
Chickweed	-	12	18	-	-
Cocklebur	12	18	24	-	36
Copperleaf, hophornbeam	-	2	4	-	6
Copperleaf, Virginia	-	2	4	-	6
Coreopsis, plains	-	6	12	-	18

ANNUAL WEEDS RATE TABLE 90

ANNUAL WEEDS RATE TABLE
RATE
(fluid ounces per acre)
WEED SPECIES 11 15 22 27 32
Maximum height/length (in inches)

Corn, volunteer	6	12	20		
Corn speedwell	12				
Crabgrass	3	6	12		
Crowfootgrass			6		12
Cutleaf evening primrose			3		6
Devilsclaw (unicorn plant)	3	6			
Dwarf dandelion	12				
Eastern manna grass	8	12			
Eclipta	4	8	12		
Fall panicum	4	6			12
Falsedandelion		20			
Falsellax, smallseed	12				
Fiddleneck		6	12		
Field pennycress	6	12			
Filaree			6		12
Fleabane, annual	6	20			
Fleabane, hairy (<i>Conyza bonariensis</i>)			6		10
Fleabane, rough	3	6	12		
Florida pusley			4		6
Foxtail, giant, bristly, yellow	6	12	20		
Foxtail, Carolina	10				
Foxtail, green	12				
Goatgrass, jointed	6	12			
Goosegrass		3	6		12
Grain sorghum (milo)	6	12	20		
Groundcherry		3	6		9
Groundsel, common		6	10		
Hemp sesbania		2	4	6	8
Henbit			6		12
Horseweed/ Mare's tail (<i>Conyza canadensis</i>)		6	12		18

Richgrass	6	8	12		18
Jimsonweed			12		18
Johnson grass, seedling	6	12	18		24
Junglerice		3	6	7	9
Knottweed			6		12
Kochia*		3 to 6	12		
Lambsquarters		6	12		20
Little barley	6	12			
London rocket	6		24		
Mayweed		2	6	12	18
Morningglory, annual (<i>Ipomoea spp.</i>)			3		6
Mustard, blue	6	12	18		
Mustard, fensy	6	12	18		
Mustard, tumble	6	12	18		
Mustard, wild	6	12	18		
Nightshade, black		4	6		12
Nightshade, hairy		4	6		12
Oats	3	6	18		
Pigweed species		12	18	24	
Prickly lettuce		6	12		
Purslane			3		6
Ragweed, common		6	12		18
Ragweed, giant		6	12		18
Red rice			4		
Rye, volunteer/cereal?	6	18	18+		
Ryegrass			6		12
Sandbur, field	6	12			
Sandbur, longspine	6	12			
Shattercane	6	12	20		
Shepherd's-purse	6	12			
Sicklepod		2	4		8
Signalgrass, broadleaf		3	6	7	9
Smartweed, ladythumb			6		9
Smartweed, Pennsylvania			6		9
Sowthistle, annual			6		12

ANNUAL WEEDS RATE TABLE 91

ANNUAL WEEDS RATE TABLE 92

ANNUAL WEEDS RATE TABLE

WEED SPECIES	RATE (fluid ounces per acre)				
	11	16	22	27	32
	Maximum height/length (in inches)				
Spanish needles	-	-	6	-	12
Speedwell, purslane	12	-	-	-	-
Sprangletop	6	12	20	-	-
Spurge, prostrate	-	6	12	-	-
Spurge, spotted	-	6	12	-	-
Spurry, umbrella	6	-	-	-	-
Stinkgrass	-	12	-	-	-
Sunflower	12	18	-	-	-
Swinecress	-	5	12	-	-
Tea weed/Prickly sida	2	4	-	-	6
Texas panicum	6	8	12	-	24
Thistle, Russian ⁵	6	12	-	-	-
Velvetleaf	-	6	-	-	12
Virginia pepperweed	18	-	-	-	-
Waterhemp	-	6	-	-	12
Wheat ²	6	12	18	-	-
Wheat (overwintered)	6	12	-	-	18
Wild oats	3	6	18	-	-
Wild proso millet	6	12	-	-	18
Witchgrass	12	-	-	-	-
Woolly cupgrass	6	12	-	-	-
Yellow rocket	12	20	-	-	-

¹ For control of downy brome in no-till systems, use 16 fluid ounces per acre.

² Performance is better if application is made before this weed reaches the boot stage of growth.

³ Use 16 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fluid ounces followed by 22 fluid ounces of this product per acre.

⁴ Do not treat kochia in the button stage.

⁵ Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

13.1 Annual Weeds—Rates for 10 to 40 Gallons per Acre

Apply 22 to 44 fluid ounces of this product per acre. Use 22 fluid ounces per acre if weeds are less than 6 inches tall, 32 fluid ounces per acre if weeds are 6 to 12 inches tall and 44 fluid ounces per acre if weeds are greater than 12 inches tall. These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

13.2 Annual Weeds—Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K

8 to 11 fluid ounces of this product plus 0.25 pound of dicamba or 0.5 pound of 2,4-D or 1 to 2 fluid ounces of Tordon 22K per acre will control the following weeds with the maximum height or length indicated: 6 inches—prickly lettuce, marestail/horseweed, morningglory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12 inches—cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

11 fluid ounces of this product plus 0.5 pound of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

ANNUAL WEEDS RATE TABLE 94

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

13.3 Annual Weeds—Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7 percent solution.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 4 percent solution for annual and perennial weeds and a 4 to 7 percent solution for woody brush and trees.

13.4 Annual Weeds—Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

16 to 20 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fluid ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 0.125 pound of dicamba for control).

14.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)

Apply to actively growing perennial weeds.

NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

Alfalfa	1-1.5	3-10	1.5%
---------	-------	------	------

Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Alligatorweed	3	3-20	1%
---------------	---	------	----

For partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.

Anise (fennel)			1-1.5%
----------------	--	--	--------

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Bahiagrass	2-3.3	3-20	1.5%
------------	-------	------	------

Apply when most plants have reached the early head stage.

Bentgrass	1	10-20	1.5%
-----------	---	-------	------

For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.

PERENNIAL WEEDS RATE TABLE 95

187

PERENNIAL WEEDS RATE TABLE 96

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Mix % Solution
--------------	-------------	--------------------	---------------------

Bermudagrass 2-3.3 3-20 1.5%

For control, apply 3.3 quarts of this product per acre. For partial control, apply 64 fluid ounces per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.

Bermudagrass water (knotgrass) 0.7-1 5-10 1.5%

Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only: Apply 22 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermudagrass that is 12 to 18 inches in length.

This product is not registered in California for use on water Bermudagrass.

Bindweed, field 0.4-3.3 3-20 1.5%

Do not treat field bindweed under drought stress as good soil moisture is necessary for active growth.

For control, apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Also for control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba in 10 to 20 gallons of water per acre. Do not apply by air.

For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product plus 1.0 pound of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applica-

tions. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 22 fluid ounces to 3.3 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky 0.7-1.5 3-40 1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Blueweed, Texas 2-3.3 3-40 1.5%

Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Brackenfern 2-3.3 3-40 1%

Apply to fully expanded fronds that are at least 18 inches long.

Bromegrass, smooth 0.7-1.5 3-40 1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly-leaf — 3-20 1.5%

For control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba per acre. For partial control, apply 22 fluid ounces of this product plus 0.5 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

PERENNIAL WEEDS RATE TABLE 97

188

PERENNIAL WEEDS RATE TABLE 98

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand Held % Solution
Canarygrass, reed	1.5-2	3-40	1.5%
For best results, apply when most plants have reached the boot-to-head stage of growth.			
Catnip	2-3.3	3-40	1.5%
Apply when most plants have reached the early head stage.			
Clover, red, white	2-3.3	3-20	1.5%
Apply when most plants have reached the early bud stage.			
Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.			
Cogongrass	2-3.3	10-40	1.5%
Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.			
Dallisgrass	2-3.3	3-20	1.5%
Apply when most plants have reached the early head stage.			
Dandelion	2-3.3	3-40	1.5%
Apply when most plants have reached the early bud stage of growth.			
Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre.			
Dock, curly	2-3.3	3-40	1.5%
Apply when most plants have reached the early bud stage of growth.			
Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1.0 pound of 2,4-D in 3 to 10 gallons of water per acre.			
Dogbane, hemp	2-3.3	3-40	1.5%
Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.			
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.			
Fescue (except tall)	2-3.3	3-20	1.5%
Apply when most plants have reached the early head stage.			
Fescue, tall	0.7-2	3-40	1.5%
Apply 64 fluid ounces of this product per acre when most plants have reached boot-to-early seedhead stage of development.			
Fall applications only. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 11 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.			
Guineagrass	1.5-2	3-40	1%
Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment.			
In Texas and ridge of Florida, use 44 fluid ounces for control. In the flatwoods region of Florida, 64 fluid ounces is required for control.			
Horsenettle	2-3.3	3-20	1.5%
Apply when most plants have reached the early bud stage.			
Horseradish	3-40		1.5%
Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.			
Iceplant			1.5-2%
Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.			
Jerusalem artichoke	2-3.3	3-20	1.5%
Apply when most plants are in the early bud stage.			
Johnsongrass	0.4-2	3-40	1%
In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.			
For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 22 fluid ounces of this product per acre.			

PERENNIAL WEEDS RATE TABLE

Weed Species	Rate (QT/A)	Water Volume (GPA)	Handheld Solution
--------------	-------------	--------------------	-------------------

For burndown of Johnsongrass, apply 11 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)—Apply a 0.7 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass	1.5-2	3-40	1.5%
-------------	-------	------	------

Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

Knapweed	3	3-40	1.5%
----------	---	------	------

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana	2-3	3-20	1.5%
---------	-----	------	------

Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Lespedeza	2-3	3-20	1.5%
-----------	-----	------	------

Apply when most plants have reached the early bud stage.

Milkweed, common	2	3-40	1.5%
------------------	---	------	------

Apply when most plants have reached the late bud to flower stage of growth.

Muhly, wirestem	0.7-1.5	3-40	1.5%
-----------------	---------	------	------

Use 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or non-crop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

Mullein, common	2-3	3-20	1.5%
-----------------	-----	------	------

Apply when most plants are in the early bud stage.

Napiergrass	2-3	3-20	1.5%
-------------	-----	------	------

Apply when most plants are in the early head stage.

Nightshade, silverleaf	1.5	3-10	1.5%
------------------------	-----	------	------

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge, purple or yellow	0.4-2	3-40	1-1.5%
----------------------------	-------	------	--------

Apply 64 fluid ounces of this product per acre or apply a 1 to 1.5 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 11 to 44 fluid ounces of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

Orchardgrass	0.7-1.5	3-40	1.5%
--------------	---------	------	------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Orchardgrass sods going to no-till corn: Apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

PERENNIAL WEEDS RATE TABLE 102

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

Pampasgrass — — 1-1.5%

Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass 2-3-3 3-20 1.5%

Apply when most plants are in the early head stage.

Phragmites 2-3-3 10-40 1-1.5%

For partial control and best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock 1-1.5%

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Thorough coverage is necessary for best control.

Pokeweed, common 1-1.5% 3-40 1.5%

Apply to actively growing plants up to 24 inches tall.

Quackgrass 0.7-2 3-40 1.5%

In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

Redvine 0.5-1.5 5-10 1.5%

For suppression, apply 16 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 44 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed giant 1-1.5%

Best results are obtained when applications are made in late summer to fall.

Ryegrass, perennial 0.7-2 3-40 1%

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 1 quart of this product per acre.

Smartweed, swamp 2-3-3 3-40 1.5%

Apply when most plants have reached the early bud stage of growth. Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.

Sowthistle, perennial 1-1.5 3-40 1.5%

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

Spurge, leafy — 3-10 1.5%

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

PERENNIAL WEEDS RATE TABLE 103

PERENNIAL WEEDS RATE TABLE 104

Weed Species	Rate (qt/A)	Water Volume (GPA)	Hand Held Solution
--------------	-------------	--------------------	--------------------

Starthistle, yellow 1.5 10-40 1.5%

Best results are obtained when applications are made during the rosette, bolting and early flower stages.

Sweet potato, wild — — 1.5%

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke — — 1.5%

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, Canada 1.5-2 3-40 1.5%

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

Timothy 1.5-2 3-40 1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

Torpedograss 2.5-3.3 3-40 1.5%

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Trumpet creeper 1.5 5-10 1.5%

For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week

before a killing frost.

Vaseygrass 2-3.3 3-20 1.5%

Apply when most plants are in the early head stage.

Velvetgrass 2-3.3 3-20 1.5%

Apply when most plants are in the early head stage.

Wheatgrass, western 1.5-2 3-40 1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

15.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species)

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3-40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

WOODY BRUSH AND TREES

Weed Species	Rate (OZ/A)	Time of Application	Control
--------------	-------------	---------------------	---------

PC=Partial Control; C=Control

Alder	2-3	1%	C
Ash	1.5-3.3	1-1.5%	PC
Aspen, quaking	1.5-2	1%	C
Bearmat (Bearclover)	1.5-3.3	1-1.5%	PC
Beech	1.5-3.3	1-1.5%	PC
Birch	1.5-2	1%	C
Blackberry	2-3	1%	C

Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7 percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 to 2.5 quarts of this product in 10 to 40 gallons of water per acre.

Blackgum	1.5-3.3	1-1.5%	C
Bracken	1.5-3.3	1-1.5%	C
Broom, French, Scotch	—	1-1.5%	C
Buckwheat, California	—	1-1.5%	PC
Thorough coverage of foliage is necessary for best results.			
Cascara	1.5-3.3	1-1.5%	PC
Catsclaw	—	1%	PC
Ceanothus	1.5-3.3	1-1.5%	PC
Chamise	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Cherry, bitter, black, pin	1.5-2	1%	C

Coyote brush — 1-1.5% C
Apply when at least 50 percent of the new leaves are fully developed.

Dogwood	1.5-3.3	1-1.5%	PC
Elderberry	1.5-2	1%	C
Elm	1.5-3.3	1-1.5%	PC
Eucalyptus	—	1.5%	C

For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed eucalyptus plants.

Florida holly (Brazilian Peppertree)	1.5-3.3	1-1.5%	PC
Gorse	1.5-3.3	1-1.5%	PC

Hasardia — 1-1.5% PC

Thorough coverage of foliage is necessary for best results.

Hawthorn	1.5-2	1%	C
Hazel	1.5-2	1%	C
Hickory	1.5-3.3	1-1.5%	PC
Honeysuckle	2-3	1%	C
Hornbeam, American	1.5-3.3	1-1.5%	PC
Kudzu	2.5-3.3	1.5%	C

Repeat applications may be required to maintain control.

Locust, black	1.5-3	1-1.5%	PC
Madrone resprouts	—	1.5%	PC

Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Manzanita	1.5-3.3	1-1.5%	PC
Maple, red	1.5-3	1%	C

Apply a 1 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.

WOODY BRUSH AND TREES 108

Weed Species	Rate (OT/A)	Hand-Held % Solution	Comments
--------------	-------------	----------------------	----------

PC=Partial Control; C=Control

Maple, sugar	—	1%	C
Apply when at least 50 percent of the new leaves are fully developed.			
Monkey flower	—	1-1.5%	PC
Thorough coverage of foliage is necessary for best results.			
Oak, black, white	1.5-3	1-1.5%	PC
Oak, post	2-3	1%	C
Oak, northern	—	1%	C
Apply when at least 50 percent of the new pin leaves are fully developed.			
Oak, southern red	1.5-2	1%	C
Persimmon	1.5-3.3	1-1.5%	PC
Pine	1.5-3.3	1-1.5%	C
Poison ivy/			
Poison oak	2.5-3.3	1.5%	C
Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.			
Poplar, yellow	1.5-3.3	1-1.5%	PC
Redbud, eastern	1.5-3.3	1-1.5%	C
Rose, multiflora	1.5	1%	C
Treatments should be made prior to leaf deterioration by leaf-eating insects.			
Russian olive	1.5-3.3	1-1.5%	PC
Sage, black	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Sage, white	1.5-3.3	1-1.5%	PC
Sage brush,			
California	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Salmonberry	1.5-2	1%	C

Salcedar	1.5-3.3	1-1.5%	C
Sassafras	1.5-3.3	1-1.5%	PC
Sourwood	1.5-3.3	1-1.5%	PC
Sumac, poison,			
smooth, winged	1.5-3	1-1.5%	PC
Sweetgum	1.5-2	1%	C
Swordfern	1.5-3.3	1-1.5%	PC
Tallowtree, Chinese	—	1%	C
Thorough coverage of foliage is necessary for best results.			
Tan oak resprouts	—	1.5%	PC
Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.			
Thimbleberry	1.5-2	1%	C
Tobacco, tree	—	1-1.5%	PC
Trumpet creeper	1.5-2	1%	C
Vine maple	1.5-3.3	1-1.5%	PC
Virginia creeper	1.5-3.3	1-1.5%	C
Waxmyrtle,			
southern	1.5-3.3	1-1.5%	PC
Willow	2-3	1%	C

16.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

WOODY BRUSH AND TREES 110

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY, IN NO EVENT SHALL

THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Amplify, Bullet, Degree, Degree Xtra, Farmsource, Harness, Lariat, Lasso, Micro-Tech, Monsanto and the Vine symbol, Permit, Roundup Original, Roundup Ready, Roundup UltraMAX, Roundup WEATHERMAX and Transorb are trademarks of Monsanto Technology LLC.

Assure, Authority, Canopy, Escort, Krovar, Leadoff, Lexone, Oust and Telar are trademarks of E.I. duPont de Nemours & Co. Inc.

Direx, Karmex, Linex and Lorox are trademarks of Griffin LLC.

Barricade, Bicep MAGNUM, Boundary, Dual MAGNUM, Endurance, Flexstar, Fusion, Princep Caliber, Reflex, Solicam and Vanquish are trademarks of Syngenta CropProtection Inc.

Firstate, Fulltime, Python, Surflan, TopNotch and Tordon are trademarks of Dow AgroSciences LLC.

Arsenal, Banvel, Clarity, Distinct, Frontier, Guardsman, Marksman, Outlook, Pendulum, Plateau, Prowl, Pursuit, Pursuit Plus, Sahara, Scepter, Squadron and Steel are trademarks of BASF Corp.

Balance, Folex, Ginstar, Prep, and Ronstar are trademarks of Aventis CropSciences.

Goal is a trademark of Rohm and Haas Company.

Axiom, DEF, Domain, Epic and Sencor are trademarks of Bayer Crop Protection.

Aim, Command and Gauntlet are trademarks of FMC Corporation.

Dewinot is a trademark of United Phosphorus Inc.

Sim-Trol is a trademark of Sipcam Agro USA, Inc.

Valor is a trademark of Valent USA Corporation.

115

This product is protected by U.S. Patent Nos.
5,688,085 and 6,365,551. Other patents pending.
No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-537

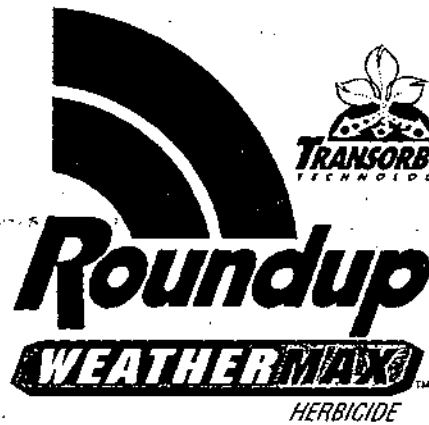
In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

MONSANTO



©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167 USA

63003A1-1/53



Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS). DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many cropping systems, farmsteads and Conservation Reserve Program acres.



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

April 17, 2002

Document Processing Center (NOTIF)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: MON 007 Herbicide (EPA Reg. No. 524-537)
Final Printed Labeling
11-Apr-2002 Approval

Dear Mr. Tompkins:

On 11-Apr-2002, EPA approved a new herbicide product as EPA Reg. No. 524-537. The brand name "MON 007 Herbicide", included in the approved Master Label text, will be used initially for commercial introduction. Enclosed are three copies each of final printed booklet labels, one example container label, and aerial supplemental labels for California and Arkansas that will be used for the product in the marketplace.

Label Type	Print Plate No.	Comparison of stamped vs printed
Booklet	63002A1-1/53	Printed with minor deviations from stamped text (see A attached)
Container (box)	63002A1-3/53X2 *	Constructed from stamped text intended for container labeling.
Aerial - CA / Fresno	63002A1-9	Printed with minor deviations from stamped text (see B attached)
Aerial - AR	63002A1-8	Printed as stamped
* Note: A reduced-size copy of the gummed box label is supplied for ease of storage		

Monsanto appreciates the Agency's quick work on this registration and the accompanying manufacturing use product and tolerance petition.

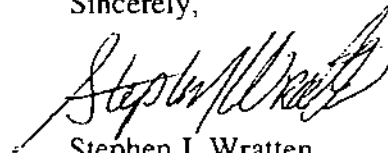
1-36

This notification of minor label revisions during preparation of the Final Printed Label is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR§ 152.46, and no other changes (beside those outlined herein) have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statements to the EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement actions and penalties under sections 12 and 14 of FIFRA.

The submitted Final Printed Label contains several corrections as described in the attached list of typographical errors, grammar improvements. These changes have no impact on the allowed use sites, pests, or application rates and serve to make the label more understandable by purchasers. There are several instances of voluntary reduction in the scope of use that are also permitted by registrants; these reductions in product scope apply solely to the marketing of this branded product and are not intended to constitute any change to the underlying scope of the registration itself that would pertain to products associated with this registration.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-783-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 007 FPL.doc

A. Minor differences between 11-Apr-2002 Master Label approval and Final Printed Booklet

1. The booklet is based on Part I - Crops of the Master Label – Parts II, III, and IV are not included.
2. "MON 007 Herbicide" and "524-537" substituted for placeholder text throughout.
3. Certain approved marketing statements have not been printed at this time. (Page 2)
4. Container-specific statements (stamped text pages 2, 3, and 8) are removed to the appropriate containers – see the enclosed box label, for example.
5. Monsanto's Patent Attorney has directed a patent number update. (page 5).
6. Monsanto has made a voluntary rate reduction at the low end of the rate ranges throughout the labeling. The approved 12-fluid-ounce rate is reduced to 11 ounces to more accurately reflect an exact acid equivalent rate translation from Roundup UltraMAX. Likewise, approved 28-fluid-ounce rates reduced to 27 fluid ounces.
7. Section 8.2 Corn, Aim Herbicide was added to tank mixes based on approval of supplemental label in Master Label II.D for preplant tank mixtures with Aim.
8. Section 9.1, Berry Crops, LABELED CROPS, "Raspberry (black, red)" has been voluntarily deleted based on crop injury concerns.
9. Section 11.0, spelling of word "burcumber" corrected to "burcucumber".
10. Sections 11.1 and 11.4, California statement above boxed table: second occurrence of word "approved" changed to "accepted" based on the wording agreed with CDPR.
11. Section 11.1 Monsanto has voluntarily reduced the use rates over-the-top of canola in several places. Approved application rates based on submitted residue studies exceed those presently necessary in the marketplace for weed control.
12. Section 11.2, Preplant, Preemergence, At-Planting subsection; TANK MIXTURES paragraph, 1st sentence: added missing word "rate" after "labeled" for clarity.
13. Section 11.3 Cotton, Salvage Treatment: Monsanto has voluntarily reduced the approved 1 quart rate to 22 fluid ounces to reduce the potential for crop injury.
14. Section 11.4, California statement above boxed table: The cut-and-paste erroneous inclusion of the word "canola" was corrected to the intended word "soybeans".
15. Sections 13.0 to 13.7 were inserted verbatim from Master Label Part III.8.0 to 8.8, except omitting part 8.2 (Forestry). The numbering of the Table of Contents and subsequent Section Headers was adjusted to accommodate this insertion.
16. Section 13.0. The cross-references to weed rate tables were changed to the correct name of the appropriate booklet sections.
17. Section 16, WOODY BRUSH AND TREES RATE TABLE, subheading "(Alphabetically by Species)" added to match other weed rate table format.
18. The trademark references were edited slightly to properly reference brand names mentioned in the printed text.

B. Minor differences between 11-Apr-2002 Master Label approval and Final Printed California Aerial Supplemental.

1. The label is based on Part II of the Master Label – Supplemental Labeling for Crops – Sections F and G, combined with Part IV – Supplemental Labeling for Industrial, Turf, and Ornamental – Section C.
2. California Department of Pesticide Regulation has requested that Monsanto combine these supplemental labeling instructions in to a single document.
3. "MON 007 Herbicide" and "524-537" substituted for placeholder text throughout.
4. The headers "Part I – Crop Uses" and "Part II – Crop Uses" were added to segment the text derived from the two places described in point 1 above.
5. Text that was common to both crop and non-crop uses was moved to the beginning of the label prior to "Part I – Crop uses".
6. Point 5 on page 2 of the printed supplemental label is brought forward from "Part II - Non-crop uses".
7. Cross-reference statements in the Fresno Section referring to the California aerial supplemental label were changed, since both now occur in one document.
8. Point 1 in the stamped non-crop aerial label, referring to preemergence treatments in labeled crops, was omitted, since the entire "Part I Crop Uses" is already included in the same document.



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☒ Other

OPP Identifier Number

288012

Application for Pesticide - Section I

1. Company/Product Number 524-537	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) MON 007 Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input checked="" type="checkbox"/> Final printed labels in response to Agency letter dated <u>11-Apr-2002</u>
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of final printed labeling

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____	
* Certification must be submitted		If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt.	No. per container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____			

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Dr. Marsha Gay	Title Product Registration Manager	Telephone No. (Include Area Code) (202) 783-2460	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			6. Date Application Received (Stamped)
2. Signature 	3. Title Manager, Registrations		
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date April 17, 2002		

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE:

Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR MON 007™ HERBICIDE BEFORE
PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS
SUPPLEMENTAL LABELING.

When using MON 007 herbicide as permitted according to this
supplemental labeling, read and follow all applicable directions,
restrictions, and precautions on the label booklet provided with the
pesticide container and on this supplemental labeling. This supplemental
labeling must be in the possession of the user at the time of pesticide
application.



NOT REVIEWED
In Accordance with PR Notice 822
Based on Draft Labeling Dates

4/11/02



EPA Reg. No. 524-537

MON 007 and Roundup Ready are trademarks of Monsanto Technology LLC.

FOR AERIAL APPLICATION IN ARKANSAS ONLY.

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product
in any manner inconsistent with its labeling.

This labeling must be in the possession of the
user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH
FOLIAGE, GREEN STEMS, EXPOSED NON-
WOODY ROOTS OR FRUIT OF CROPS (EX-
CEPT AS SPECIFIED FOR INDIVIDUAL
ROUNDUP READY® CROPS), DESIRABLE

PLANTS AND TREES, BECAUSE SEVERE
INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING"
sections of the label booklet for this product for
essential product performance information.

USE DIRECTIONS

AVOID DRIFT. DO NOT APPLY INTO STILL AIR
WHERE THERE IS A TEMPERATURE IN-
VERSION LAYER LOW ENOUGH FOR FINE
SPRAY PARTICLES TO BECOME SUSPENDED

AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the recommended rate of this product in 3 to 15 gallons of water per acre.

Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range are recommended.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety.

The distance of the outermost nozzles on the boom must not exceed 75 percent of the length of the wingspan or rotor. In many cases, reducing this distance to 65 percent of the length of the wingspan or rotor will improve drift control without affecting the swath width.

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge. Do not apply this product when winds are in excess of 10 miles per hour.

Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 miles per hour.

Use the following guidelines when applications are made near crops or other desirable vegetation:

1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

Read the "Limit of Warranty and Liability" in the label booklet for MON 007 herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

4/11/02

63072A1-8

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR MON 007™ HERBICIDE BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using MON 007 herbicide as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.



EPA Reg. No. 524-537

MON 007 and Roundup Ready are trademarks of Monsanto Technology LLC. Garlon™ is a trademark of Dow AgroSciences, LLC.

FOR AERIAL APPLICATION IN CALIFORNIA ONLY
(including Fresno county, California)

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for this product for essential product performance information.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

NOT REVIEWED

In Accordance with PR Notice 83-2,
Used on Draft Labeling Dated 4/11/02

309

AVOID DRIFT—DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops:

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.
5. APPLY BY AIR ONLY TO NONRESIDENTIAL AREAS.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application—To avoid streaking, uneven, or over-lapped application, use appropriate marking devices. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

PART I. CROP USES:

Aerial applications of this product are allowed in the following situations:

1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
2. In alfalfa and pasture renovation applications.
3. Over-the-top applications in Roundup Ready corn and cotton. Refer to further label instructions for Roundup Ready corn and Roundup Ready cotton for specific application instructions for over-the-top applications in these crops.
4. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready corn and Roundup Ready cotton. Refer to the MON 007 herbicide label instructions for Roundup Ready corn and Roundup Ready cotton for specific preharvest application instructions for each individual crop.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

Use the recommended rates of this product in 3 to 15 gallons of water per acre.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED THE FOLLOWING MAXIMUM RATES WHEN MAKING APPLICATIONS BY AIR:

22 fluid ounces	44 fluid ounces
	Alfalfa
Corn	
Roundup Ready® Corn	
	Cotton
	Roundup Ready® Cotton
	Fallow
	Reduced Tillage Systems
	Pastures
Wheat	

For FRESNO COUNTY, CALIFORNIA ONLY (From February 15 through March 31 only) the following applies:

Applicable Area

This section only applies to the area contained inside the following boundaries within Fresno County, California:

North: Fresno County line
South: Fresno County line
East: State Highway 99
West: Fresno County line

General Information



Always read and follow the label directions and precautionary statements for all products used in the aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Recommendations

A written recommendation **MUST** be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation **MUST** state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night—Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of this product, call 1-800-332-3111.

For additional information on the proper aerial application of this product, call 916-784-1718.

Note: For aerial application from April 1 through February 14, refer to the other sections of this supplemental label.

PART II. NONCROP USES:

Aerial applications of this product are allowed in the following situations:

1. Aid to burning for establishment and maintenance of fuel breaks
2. Establishing fire perimeters and black lines
3. Aid to prescribed burning
4. Along fire roads
5. Range conversion
6. Habitat restoration and management
7. Wildlife food plots

Apply 1 to 5 quarts of this product in 5 to 15 gallons of water per acre using aerial (helicopter only) applications.

To broaden the spectrum of control, Garlon™ 4 may be tank mixed with this product at the rate of 0.5 to 2 quarts per acre. The rate of Garlon should not exceed 1/2 the rate of this product (e.g. 1 quart of Garlon to 2 quarts of this product) for best results.

Read the "Limit of Warranty and Liability" in the label booklet for MON 007 herbicide before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

63002A1-9

4/11/02





Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many cropping systems, farmsteads and Conservation Reserve Program acres.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Carefully follow detailed instructions in label booklet.

Read the entire label before using this product.

This container is not to be sold to homeowners for residential use.

Use only according to label instructions.

Read the "LIMIT OF WARRANTY AND LIABILITY" which appears in the label booklet, before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.
HARMFUL IF INHALED.

Avoid contact with eyes, skin or clothing.
Avoid breathing vapor or spray mist.

FIRST AID: Call a poison control center or doctor for treatment advice.	
IF IN EYES	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses if present after the first 5 minutes then continue rinsing eye.
IF ON SKIN	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.
IF INHALED	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
<ul style="list-style-type: none"> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (314) 694-4000, collect, day or night, for emergency medical treatment information. This product is identified as MON 007 herbicide, EPA Reg. No. 524-537. 	

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants; shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

In case of an emergency involving this herbicide product, or for medical assistance, Call Collect, day or night, (314) 694-4000.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers. DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this product.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

NOW EVEN MORE CONCENTRATED MON 007 CONVERSION TABLE		
MON 007 (Ounces)	Roundup UltraMAX (Ounces)	Roundup Original (Ounces)
16	20	24
22	26	32
27	32	40
32	40	48

Storage and Disposal

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(See label booklet for Complete Directions for Use.)

ACTIVE INGREDIENT:

* Glyphosate, N-(phosphonomethyl)glycine,	
in the form of its potassium salt	48.8%
OTHER INGREDIENTS:	51.2%
	100.0%

* Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,888,085 and 5,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-537

EPA Est. (L) 524-LA-1 or (M) 524-LA-1

Lot number prefix L or M indicates appropriate establishment number.

For product information or assistance in using this product,
Call toll-free 1-800-332-3111.

MON 007, Monsanto and the Vine symbol and Roundup Ready are trademarks of Monsanto Technology LLC.



TWC 2.5 GAL. UNITS

©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167 U.S.A.

63002A1-3/53X2

NOT REVIEWED

In Accordance with PR Notice 83-2,
Based on Draft Labeling Notes

210

63002A1-1/53



In Accordance with PR Notice 6472
Based on Draft Labeling Notice

Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE,
GREEN STEMS, EXPOSED NON-WOODY ROOTS OR
FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR
INDIVIDUAL ROUNDUP READY® CROPS).
DESIRABLE PLANTS AND TREES, BECAUSE SEVERE
INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready Crops.

Selective broad-spectrum weed control in Roundup
Ready crops. Non-selective, broad-spectrum weed
control for many cropping systems, farmsteads
and Conservation Reserve Program acres.

211

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Read the entire label before using this product.

Use only according to label instructions.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

CONTENTS

1	1.0	INGREDIENTS	5
2	2.0	IMPORTANT PHONE NUMBERS	5
3	3.0	PRECAUTIONARY STATEMENTS	6
	3.1	Hazards to Humans and Domestic Animals	6
	3.2	Environmental Hazards	8
	3.3	Physical or Chemical Hazards	8
4	4.0	STORAGE AND DISPOSAL	10
5	5.0	GENERAL INFORMATION	
		(How This Product Works)	10
6	6.0	MIXING	13
	6.1	Mixing with Water	13
	6.2	Tank Mixing Procedure	14
	6.3	Mixing for Hand-Held Sprayers	15
	6.4	Ammonium Sulfate	15
	6.5	Colorants or Dyes	16
	6.6	Drift Control Additives	16

7	7.0	APPLICATION EQUIPMENT AND TECHNIQUES	16
	7.1	Aerial Equipment	17
	7.2	Ground Broadcast Equipment	21
	7.3	Hand-Held or High-Volume Equipment	21
	7.4	Selective Equipment	22
	7.5	Injection Systems	25
	7.6	CDA Equipment	25
8	8.0	ANNUAL AND PERENNIAL CROPS	
		(Alphabetical)	26
	8.1	Cereal and Grain Crops	28
	8.2	Corn	30
	8.3	Cotton	33
	8.4	Fallow Systems	34
	8.5	Grain Sorghum (Milo)	36
	8.6	Herbs and Spices	39
	8.7	Oil Seed Crops	40
	8.8	Soybeans	41
	8.9	Sugarcane	43
	8.10	Vegetable Crops	45
	8.11	Miscellaneous Crops	49
9	9.0	TREE, VINE, AND SHRUB CROPS	
		(Alphabetical)	51
	9.1	Berry Crops	56
	9.2	Citrus	58
	9.3	Miscellaneous Tree Food Crops	59
	9.4	Non-Food Tree Crops	59
	9.5	Pome Fruit	59
	9.6	Stone Fruit	60
	9.7	Tree Nuts	60
	9.8	Tropical and Subtropical Trees and Fruits	61
	9.9	Vine Crops	62

212

10	10.0 PASTURE GRASSES, FORAGE LEGUMES, AND RANGELANDS	63
10.1	Alfalfa, Clover, and Other Forage Legumes	63
10.2	Conservation Reserve Program (CRP)	65
10.3	Grass Seed Production	66
10.4	Pastures	68
10.5	Rangelands	69
10.6	Turf Grass Sod Production	70
11	11.0 ROUNDUP READY CROPS	70
11.1	Canola with the Roundup Ready Gene	73
11.2	Corn with the Roundup Ready Gene	75
11.3	Cotton with the Roundup Ready Gene	78
11.4	Soybeans with the Roundup Ready Gene	81
11.5	Sugar Beets with the Roundup Ready Gene	84
12	12.0 NONCROP USES AROUND THE FARMSTEAD	85
12.1	General Weed Control and Trim-And-Edge	85
12.2	Greenhouse/Shadehouse	86
12.3	Chemical Mowing	86
12.4	Cut Stumps	87
12.5	Habitat Management	88
13	13.0 INDUSTRIAL, TURF AND ORNAMENTAL	88
13.1	Cut Stumps	89
13.2	General Noncrop Areas and Industrial Sites	89
13.3	Habitat Management	94
13.4	Injection and Frill (Woody Brush and Trees)	94
13.5	Ornamentals, Plant Nurseries, and Christmas Trees	95
13.6	Railroads	96
13.7	Roadsides	98
14	14.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species)	101
14.1	Annual Weeds—Rates for 10 to 40 GPA	106
14.2	Annual Weeds—Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K	106

14.3	Annual Weeds—Hand-Held or High-Volume Equipment	107
14.4	Annual Weeds—Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems	107

15	15.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)	108
-----------	--	-----

16	16.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species)	119
-----------	--	-----

17	17.0 LIMIT OF WARRANTY AND LIABILITY	124
-----------	---	-----

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt 48.8%

OTHER INGREDIENTS: 51.2%
100.0%

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,688,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT, CALL TOLL-FREE, 1-800-332-3111.

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314) 694-4000

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

FIRST AID:	Call a poison control center or doctor for treatment advice.
IF IN EYES	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses if present after the first 5 minutes then continue rinsing eye.
IF ON SKIN	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes.
IF INHALED	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as MON 007™ herbicide, EPA Registration No. 524-537. You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.</p>	

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

214

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks and chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

See container label for STORAGE AND DISPOSAL instructions.

**5.0 GENERAL INFORMATION
(How this product works)**

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when MON 007 herbicide is the only pesticide used unless otherwise directed. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of this label for instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4

days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" for recommendations for specific weeds.

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germi-

216

nating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5.3 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sullosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sullosate containing products does not exceed stated maximum use rate.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

6.0 MIXING

Use the following conversion table to help determine application rates of MON 007 herbicide based on commonly used rates of Roundup Original™ and Roundup UltraMAX™ herbicides.

NOW EVEN MORE CONCENTRATED MON 007 CONVERSION TABLE		
MON 007 (Ounces)	Roundup UltraMAX (Ounces)	Roundup Original (Ounces)
16	20	24
22	26	32
27	32	40
32	40	48

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or mini-

217

mize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle,

thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Volume	Desired Amount of MON 007					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	1 oz	1.3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.7 qt	1 qt	1.5 qt	4 qt	7 qt
100 gal	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank

mixed with certain residual herbicides, on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

6.5 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's recommendations.

6.6 Drift Control Additives

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial—Fixed Wing and Helicopter

Ground Broadcast Spray—Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment—Knapsack and backpack sprayers, pump-up pressure sprayers, hand-guns, handwands, mistblowers*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment—Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems—Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA)—Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 22 fluid ounces per acre. Refer to the individual use area sections of this label for recommended volumes, application rates, and further instructions.

FOR AERIAL APPLICATION IN CALIFORNIA OR SPECIFIC COUNTIES THEREIN, OR IN ARKANSAS, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATION.

219

TIONS IN THAT STATE OR COUNTY FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

This product plus dicamba tank mixtures may not be applied by air in California.

Ensure uniform application—To avoid streaked, uneven or overlapped application, use appropriate marking devices.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the "Wind", "Temperature and Humidity", and "Temperature Inversions" sections of this label).

Controlling Droplet Size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom length:** For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 miles per hour due to variable wind direction and high inversion

22

potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The product should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid direct application to any body of water.

Aircraft Maintenance

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

7.2 Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "ANNUAL WEEDS—HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of this product label.

7.4 Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on this label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Recirculating Spray System

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Shielded and Hooded Applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. A single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Spray volume should be 20-30 gallons per acre.

222

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.
- Leave at least an 8-inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

Wiper Applicators

When applied under the conditions described in the following paragraphs, this product **CONTROLS** many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, spanishneedles and bristly starbur; and **SUPPRESSES** many weeds including Florida beggarweed, Bermudagrass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, velvetleaf.

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to

ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators—Solutions ranging from 33 to 75 percent of this product in water may be used. Apply this solution to weeds listed in this section.

For Panel Applicators—Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

7.6 CDA Equipment

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast

582

equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1 quart per acre). For the control of perennial weeds, apply a 20 to 30 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 miles per hour (2 to 3 quarts per acre).

Controlled droplet application equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN SECTION 8 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PRE-HARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label or separately published Monsanto Supplemental Labeling for instructions for treating Roundup Ready crops.

TYPES OF APPLICATIONS:

Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, At-Planting, Hooded Sprayers in row-middles, Shielded Sprayers in row-middles, Wiper Applicators in row-middles, and Post-Harvest treatments.

GENERAL USE INSTRUCTIONS:

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or pre-

emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" in this label. Repeat applications may be made up to a maximum of 5.3 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless

224

otherwise specified in this product's labeling. Treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

8.1 Cereal and Grain Crops

LABELED CROPS: Barley, Buckwheat, Millet (pearl, proso), Oats, Rice, Rye, Quinoa, Tef, Teosinte, Triticale, Wheat (all types), Wild Rice.

PRECAUTIONS, RESTRICTIONS: Do not treat rice fields or levees when field contains water.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Wiper Applications Over-the-Top (Feed Barley and Wheat only), Preharvest (Feed Barley and Wheat only).

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

Red Rice Control Prior to Planting Rice

USE INSTRUCTIONS: Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to

application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

PRECAUTIONS, RESTRICTIONS: Avoid spraying during low humidity conditions, as reduced control may result. Do not treat rice fields or levees when the fields contain floodwater. Do not re-flood treated fields for 8 days following application.

Spot Treatment (except Rice)

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Wiper Applications Over-the-Top (Feed Barley and Wheat only)

USE INSTRUCTIONS: Wiper applications may be used in feed barley and wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, and when the rye is at least 6 inches above the wheat crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applicators.

Preharvest (Feed Barley and Wheat only)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. Stubble may be grazed immediately after harvest.

275

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.2 Corn

TYPES OF CORN: Field Corn, Seed Corn, Silage Corn, Sweet Corn and Popcorn.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest.

For Roundup Ready corn, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D	Frontier™/Outlook™
Aim™	FulTime™
Atrazine	Guardman™/Leadoff™
Axiom™	Harness®
Balance™	Harness Xtra
Banvel™/Clarity™	Harness Xtra S 6L
Bicep MAGNUM™	Lariat®
Bicep II MAGNUM™	Lasso®/Alachlor
Bullet®	Linex™/Lorox™
Degree™	Marksman™
Degree Xtra™	Micro-Tech®
Distinct™	Prowl™
Dual MAGNUM™	Python™
Dual II MAGNUM™	Simazine
Epic™	TopNotch™

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this recommendation includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

2216

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS, RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fluid ounces of this product per acre for each application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 Cotton

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Selective Equipment, Spot Treatment, Preharvest.

For Roundup Ready cotton, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

Hooded Sprayer, Selective Equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to boll opening of cotton.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop

receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" sections of this label. For cotton regrowth inhibition, apply 11 to 44 fluid ounces of this product per acre.

Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank mixed with DEFTM 6, FolexTM, Ginstar, or PrepTM to provide additional enhancement of cotton leaf drop.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

8.4 Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Aid-to-Tillage.

Chemical Fallow

USE INSTRUCTIONS: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute

for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting. Do not apply dicamba tank mixtures by air in California.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba is applied within 45 days of planting.

Preplant Fallow Beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product will control weeds listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" sections of this label.

TANK MIXTURES: In addition, 8 fluid ounces of this product plus 2 to 3 fluid ounces of GoalTM 2XL per acre will control the following weeds with the maximum height or length indicated: 3 inches—common cheeseweed, chickweed, groundsel; 6 inches—London rocket, shepherd's-purse.

11 fluid ounces of this product plus 2 to 3 fluid ounces of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 6 inches—common cheeseweed, groundsel, marehail (*Coryza canadensis*), 12 inches—chickweed, London rocket, shepherd's-purse.

Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS, RESTRICTIONS: Tank mixtures with residual herbicides may result in reduced performance.

8.5 Grain Sorghum (Milo)

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications, Preharvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tank-mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

Atrazine	Lariat
Bicep II MAGNUM	Lasso
Bullet	Micro-Tech
Qual II MAGNUM	

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre

in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

Spot Treatment and Over-the-Top Wiper Applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this label.

PRECAUTIONS, RESTRICTIONS: For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

237

PRECAUTIONS, RESTRICTIONS: Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 22 fluid ounces of this product per acre per application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Preharvest

USE INSTRUCTIONS: Make applications at 30 percent grain moisture or less.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 Herbs and Spices

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Over-the-Top Wiper Applications (Peppermint and Spearmint only), Spot Treatments (Peppermint and Spearmint only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system.

Over-the-Top Wiper Applications or Spot Treatments (Peppermint and Spearmint only)

USE INSTRUCTIONS: This product may be used as a spot treatment or wiper application in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. In wiper applications, the applicator should be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10 percent of the total field area to be harvested should be treated at one time. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason. In wiper applications, contact of the herbicide solution with the crop may result in damage or destruction.

8.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

For Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATIONS: Those listed in Section 8.0.

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops. Broadcast applications must be made prior to emergence of the listed oil seed crops. Wiper applicators or hooded sprayers may be used between the rows once the crop is established.

TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre on canola. Do not apply more than 22 fluid ounces of this product per acre for sunflowers as a single preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

8.8 Soybeans

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest, Selective Equipment.

For Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water per acre.

Aim™	Dual II MAGNUM
Amplify™	FirstRate™
Assure II™	Flexstar™
Authority™	Frontier™/Outlook
Boundary™	Fusion™
Canopy™	Gauntlet™
Canopy XL™	Lasso
Command™	Linex
Command Xtra™	Lorox/Linuron
Domain™	Lorox Plus™
Dual MAGNUM	Micro-Tech

Prowl
Pursuit™
Pursuit Plus
Reflex™
Scepter™

Sencor™/Lexone™
Squadron™
Steel™
Valor™

This product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: Tank-mixtures with some of the above listed herbicides may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES".

This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 3.3 quarts per acre of this product for preharvest applications. Do not apply more than 44 fluid ounces per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

Selective Equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

8.9 Sugarcane

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus Spot Treatment.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.

PRECAUTIONS, RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

PRECAUTIONS, RESTRICTIONS: Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

Fallow Treatments

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 2.5 to 3.3 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Ground or aerial application equipment may be used. Applications up to 64 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of sugarcane. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

PRECAUTIONS, RESTRICTIONS: Do not allow treated weeds to come into contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

8.10 Vegetable Crops

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in row-middles, Shielded Sprayers in row-middles, Wiper Applications in row-middles, and Post-Harvest, Directed Applications (non-bearing Ginseng), Over-the-Top Wipers (Rutabagas only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this

product's labeling. Treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

8.10.1 Brassica Vegetables

LABELED CROPS: Broccoli, Chinese broccoli (gai lan), Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens.

8.10.2 Bulb Vegetables

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot.

8.10.3 Cucurbit Vegetables and Fruits

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucurbit, hechima, Chinese okra), Melons (all), *Momordica* spp (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ball melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon.

PRECAUTIONS, RESTRICTIONS: For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all), Muskmelon, Persian melon, Pumpkin, Squash (summer, winter), and Watermelon, allow at least 3 days between application and planting.

8.10.4 Leafy Vegetables

LABELED CROPS: Amaranth (Chinese spinach), Arugula (roquette), Beet greens, Cardoon, Celery, Chinese celery, Celtuce, Chaya, Chervil, Edible-leaved chrysanthemum, Garland chrysanthemum, Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Vine spinach, Swiss chard, Watercress (upland), Water spinach.

PRECAUTIONS, RESTRICTIONS: For Watercress, avoid applications within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.

8.10.5 Fruiting Vegetables

LABELED CROPS: Eggplant, Groundcherry (*Physalis* spp), Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato.

PRECAUTIONS, RESTRICTIONS: For Eggplant, Groundcherry, Pepper (all), and Tomatillo, allow at least 3 days between application and planting. For Tomato, do not make hooded or shielded sprayer applications in row middles because of the potential for crop injury.

8.10.6 Legume Vegetables (succulent or dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin); Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); Broad bean (fava); Chickpea (garbanzo); Guar; Jackbean; Lablab bean; Lentil; Pea (*Pisum*: includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea); Pigeon pea; Soybean (immature seed); Sword bean.

8.10.7 Root and Tuber Vegetables

LABELED CROPS: Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celeriac, Chayote (root), Chervil (turnip-rooted), Chicory, Chula, Dasheen (taro), Galangal, Ginger, Ginseng, Horseradish, Leren, Kava (turnip-rooted), Parsley (turnip-rooted), Parsnip, Potato, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Skirret, Sweet potato, Tanier, Turmeric, Turnip, Wasabi, Yacon, Yam bean, True yam.

Directed Applications (Non-bearing Ginseng only)

USE INSTRUCTIONS: This product may be used for general weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.

PRECAUTIONS, RESTRICTIONS: Direct applications so that there is no contact of this product with the ginseng plant. Applications must be made at least one year prior to harvest.

Over-the-Top Wiper Applications (Rutabagas only)

USE INSTRUCTIONS: Wiper applicators may be used over-the-top of rutabagas.

PRECAUTIONS, RESTRICTIONS: Allow at least 14 days between application and harvest of rutabagas.

8.11 Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: General Weed Control, Site Preparation, Spot Treatment (Asparagus)

For Roundup Ready sugar beets, see the "ROUNDUP READY CROPS" section of this label.

PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See

"APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

General Weed Control, Site Preparation

USE INSTRUCTIONS: This product may be applied for general weed control or for site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

Spot Treatment (Asparagus)

USE INSTRUCTIONS: This product may be applied immediately after cutting, but prior to the emergence of new spears.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

Post-Harvest (Asparagus)

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS, RESTRICTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select

and use recommended types of spray equipment for post-emergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

9.0 TREE, VINE, AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE, AND SHRUB CROPS WITHIN SECTION 9 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles (between rows of trees, vines or bushes), Strips (within rows of trees, vines or bushes), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, CDA equipment, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

GENERAL USE INSTRUCTIONS:

This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for general weed control or perennial grass suppression in established tree fruit and nut groves, orchards, berries, and vineyards. It may also be used for site preparation prior to planting or transplanting these crops. Apply 11 fluid ounces to 3.3 quarts per acre according to the "ANNUAL WEEDS"

and "PERENNIAL WEEDS RATE TABLES" sections of this label. Utilize rates at the higher end of the recommended rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) should be used to minimize the potential for leakage or drift of herbicide sprays onto crop. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wipers or shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

Allow a minimum of 3 days between application and transplanting.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

TANK MIXTURES: A tank mixture of this product plus Goal 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control common cheese-weed (malva) or hairy fleabane with a maximum height or diameter of 3 inches.

Strips (in rows)

TANK MIXTURES: This product may be applied in rows of tree or vine crops in tank mixtures with the following products:

Devrinol™ 50 DF	Simazine 4L
Direx™ 4L	Simazine 80W
Goal 2XL	Sim-Trol™ 4L
Karmex™ DF	Solicam™ DF
Krovar	Surtlan™ AS
Prowl	Surtlan 75W
Princep Caliber™ 90	

Do not apply these tank mixtures in Puerto Rico.

235

Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial Grass Suppression

This product will suppress perennial grasses such as bahiagrass, Bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 22 to 44 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4 to 11 fluid ounces of this product per acre east of the Rocky Mountains

and 11 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4 to 7 fluid ounces of this product per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

Cut Stump

USE INSTRUCTIONS: Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor.

Fruit Trees: Apple, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio, Walnut (black, English).

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

PRECAUTIONS, RESTRICTIONS: DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT

238

DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

9.1 Berry Crops

LABELED CROPS: Blackberry (including bingleberry, black salin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectar-berry, olallieberry, Oregon evergreen berry, phenomenal-berry, rangeberry, ravenberry, rossberry, Shawnee black-berry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Salal.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Spot Treatment in Cranberry Production and Post-Harvest Treatments in Cranberry Production.

PRECAUTIONS, RESTRICTIONS: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes, or foliage. Allow a minimum of 30 days between last application and harvest in cranberries. Allow a minimum of 14 days between last application and harvest in other berry crops. Do not make directed sprays within the cranberry bush areas prior to berry harvest.

Spot Treatment in Cranberry Production

USE INSTRUCTIONS: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be

used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 1.5 percent solution of this product. Spray to wet vegetation, not to run-off.

PRECAUTIONS, RESTRICTIONS: For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium to large-sized droplets to minimize drift in order to avoid crop injury.

Post-Harvest Treatments in Cranberry Production

USE INSTRUCTIONS: Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.4 to 0.7 percent solution of this product. Spray to wet vegetation, not to run-off. If using hand-held boom sprayers, apply 44 to 86 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Make applications only after cranberries have been harvested. Do not treat more than 10 percent of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

9.2 Citrus

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (all), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: (The recommendations below pertain to applications in Florida and Texas):

For burndown or control of the weeds listed below, apply the recommended rates of this product in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

For goatweed, apply 44 to 64 fluid ounces of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 44 fluid ounces per acre when plants are less than 8 inches tall and 64 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar™ I or Karmex™ may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial weeds:

S = Suppression
PC = Partial control

B = Burndown
C = Control

WEED SPECIES	MON 007 RATE PER ACRE			
	0.7 QT	1.3 QT	2.0 T	3.3 QT
Bermudagrass	B	—	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	—	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	—	PC	C

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in citrus crops. For citrus groves, apply as directed sprays only.

9.3 Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil).

TYPES OF APPLICATIONS: Those listed in Section 9.0.

9.4 Non-food Tree Crops

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other nonfood tree crops.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

Directed Sprays, Spot Treatment, Wipers

USE INSTRUCTIONS: This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

PRECAUTIONS, RESTRICTIONS: Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. **THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.**

Site Preparation

USE INSTRUCTIONS: This product may be used prior to planting Christmas trees.

PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect nontarget plants during site preparation applications.

9.5 Pome Fruit

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince.

242

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in pome crops.

9.6 Stone Fruit

LABELED CROPS: Apricot, Cherry (sweet, tart), Nectarine, Olive, Peach, Plum/Prune (all types), Plumcot.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

Restrictions on Application Equipment

For cherries, any application equipment listed in Section 9.0 may be used in all states.

Any application equipment listed in Section 9.0 may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states, use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. **EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.**

9.7 Tree Nuts

LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (black, English)

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconut.

9.8 Tropical and Subtropical Trees and Fruits

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados cherry (acerola), Biriba, Blumbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Hama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Bananacide (banana only).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya, and plantain crops. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

241

Bananacide (Banana only)

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 0.5 fluid ounce (15 mL) of this product's concentrate per mat (or unit). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for general weed control.

9.9 Vine Crops

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: Applications should not be made when green shoots, canes or foliage are in the spray zone.

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest in vine crops. Do not use selective equipment in kiwi.

10.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

10.1 Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-planting, Preharvest (Alfalfa only), Spot Treatment or Wiper Applications (Alfalfa and Clover only), Renovation.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: If a single application is made at rates of 44 fluid ounces per acre or less, no waiting period between treatment and feeding or grazing is required. If applications rates greater than 44 fluid ounces per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

242

Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre as a preharvest treatment. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot Treatment or Wiper Applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applications" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover,

and other labeled forage legumes. Labeled crops may be planted into the treated area.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application. If application rates of 44 fluid ounces per acre or less are used wait 36 hours after application before grazing or harvesting. If application rates greater than 44 fluid ounces per acre are used, wait 8 weeks between applications and grazing or harvesting.

10-2 Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications.

Renovation (rotating out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.

Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

10.3 Grass Seed Production

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS"

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Shielded Sprayers, Wiper Applications, Spot Treatments, Creating Rows in Annual Ryegrass.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production. Applications must be made prior to the emergence of the crop to avoid crop injury. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.

PRECAUTIONS, RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

Do not feed or graze treated areas for 8 weeks following application.

Shielded Sprayers

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.

PRECAUTIONS, RESTRICTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications

PRECAUTIONS, RESTRICTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

Spot Treatments

USE INSTRUCTIONS: Use a 1 percent solution.

PRECAUTIONS, RESTRICTIONS: Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field area. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 11 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS, RESTRICTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass.

244

grass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

Grower assumes all responsibility for crop losses from misapplication.

10.4 Pastures

LABELLED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS", including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuyu grass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

TYPES OF APPLICATIONS: Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Application.

Preplant, Preemergence and Pasture Renovation

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Spot Treatment and Wiper Application

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total pasture area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

10.5 Rangelands

TYPES OF APPLICATIONS: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Postemergence

USE INSTRUCTIONS: Apply 8 to 11 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most mature brome plants are in early flower and before the plants, including seed-heads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 11 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seed-bank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

PRECAUTIONS, RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product.

Do not make more than one application per year.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

10.6 Turf Grass Sod Production

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Spot Treatment

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for seed or sod. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. For warm-season grasses such as Bermuda-grass, summer or fall applications provide the best control. Desirable turf grasses may be planted following the above procedures.

PRECAUTIONS, RESTRICTIONS: Do not feed or graze turf grass grown for seed or sod production for 8 weeks following application.

Spot Treatment

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Monsanto Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops

during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to crop varieties that are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain the Roundup Ready gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier or Monsanto representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready crop by applying glyphosate to the weeds and Roundup Ready crop are protected under several U.S. Patents, including 5,352,605 and 5,633,435. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing the Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing the Roundup Ready trait cannot be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

2016

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For aerial applications, apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

For proper stewardship of aerial applications over-the-top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide "A Guide to On-Target Aerial Application" available by calling 1-800-ROUNDUP (1-800-768-6387) or on the internet at www.FARM-SOURCE.com.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

See the "MIXING" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise noted in this product label, supplemental labeling or fact sheets published separately by Monsanto.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 Canola with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY CANOLA MAY NOT BE PRACTICED

21

ROUNDUP READY CROPS 74

IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

Maximum Allowable Combined Application Quantities Per Season

Preplant, At-planting, Preemergence applications	44 fluid ounces per acre
Total in-crop application from emergence to 6-leaf stage	22 fluid ounces per acre

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting canola.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Weeds Controlled: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

Single Application—Apply 11 to 16 fluid ounces per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and or growth reduction. Similar injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

Sequential Application—Apply 11 fluid ounces per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as

Canada thistle and quackgrass or when controlling weeds with multiple application times.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 22 fluid ounces per acre. Allow a minimum of 60 days between last application and canola harvest.

11.2 Corn with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (in-crop), Spot Treatment, Preharvest, Post-Harvest.

Maximum Allowable Combined Application Quantities Per Season

Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	44 fluid ounces per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	22 fluid ounces per acre

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn.

248

TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

NOTE: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above.

Postemergence (in-crop)

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The postemergent application of 16 to 22 fluid ounces per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 16 to 22 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit[®] and atrazine at labeled rates. Refer to the speci-

fic product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines—the more restrictive requirements apply.

Tank-Mix Partner	Maximum Height of Corn For Application
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6 L	11 inches
Bullet* Micro-Tech*	5 inches
Permit	30 inches
atrazine	12 inches

*Bullet and Micro-Tech are not registered for use as a post-emergence application in Texas.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Single in-crop applications of this product are not to exceed 22 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 44 fluid ounces per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

Preharvest

USE INSTRUCTIONS: In Roundup Ready corn, up to 22 fluid ounces per acre of this product can be applied preharvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

11.3 Cotton with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Over-the-Top, Selective Equipment, Preharvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to layby	2.5 quarts per acre
Maximum preharvest application rate	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 4 quarts per acre. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN TWO

APPLICATIONS SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton.

Over-the-Top

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to 22 fluid ounces per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

Salvage Treatment. This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 22 fluid ounces per acre of this product may be applied either as an over-the-top applications or as a post-directed treatments sprayed higher on the cotton plants and over the weeds. **NOTE:** SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.

NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Selective Equipment

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fluid ounces per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Preharvest

USE INSTRUCTIONS: This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON. HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH

THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

11.4 Soybeans with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence, Preharvest, Post-Harvest.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from cracking throughout flowering	64 fluid ounces per acre
Maximum preharvest application rate	22 fluid ounces per acre

PRECAUTIONS/RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting soybeans.

Postemergence

USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate recommendations for specific annual weeds. In general, an initial application of 22 fluid ounces per acre on 2 to 8 inch tall weeds is recommended. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 44 fluid ounces per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

A 22- to 44-fluid-ounce per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpetcreeper, swamp smartweed and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP. To control giant ragweed, it is recommended that 22 fluid ounces per acre of this product be applied when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

PRECAUTIONS, RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering is 44 fluid ounces per acre.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans. Up to 22 fluid ounces per acre of this product can be applied by aerial or ground application.

PRECAUTIONS, RESTRICTIONS: Care should be taken to avoid excessive seed shatter loss due to ground application equipment. Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

352

11.5 Sugar Beets with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Emergence to 8-leaf stage	56 fluid ounces per acre
Between 8-leaf stage and canopy closure	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces per acre. Allow a minimum of 30 days between last application and sugar beet harvest.

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready sugar beets.

Postemergence

USE INSTRUCTIONS: This product may be applied post-emergent over-the-top to Roundup Ready sugar beets from emergence to 30 days prior to harvest. To maximize yield potential spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. Refer to

the "ANNUAL WEEDS RATE TABLES" in this label for rate recommendations for specific annual weeds. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

12.0 NONCROP USES AROUND THE FARMSTEAD

TYPES OF APPLICATIONS: General Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stumps, Habitat Management.

12.1 General Weed Control and Trim-And-Edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

TANK MIXTURES: This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and 44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS—HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for recommended rates.

Arsenal	Plateau
Banvel/Clarity	Princep DF
Barricade™ 65WG	Princep Liquid
Diuron	Ronstar 50 WP
Endurance™	Sahara
Escort™	Simazine
Karmex DF	Surflan
Krovar I DF	Telar™
Oust™	Vanquish™
Pendulum 3.3 EC	2,4-D
Pendulum WDG	

This product plus dicamba tank mixtures may not be applied by air in California.

12.2 Greenhouse/ Shadehouse

This product may be used to control weeds in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

12.3 Chemical Mowing

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 11 fluid ounces of this product per acre when treating Bermuda-grass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

PRECAUTIONS, RESTRICTIONS: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 Cut Stumps

TYPES OF APPLICATION: Treating cut stumps in any non-crop site listed on this label

USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion

Alder	Reed, giant
Eucalyptus	Saltcedar
Madrone	Sweetgum
Oak	Tan oak
Pepper, Brazilian	Willow
Pine, Austrian	

PRECAUTIONS, RESTRICTIONS: Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

259

12.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance, Wildlife Food Plots.

Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.

Wildlife Food Plots

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

13.0 INDUSTRIAL, TURF AND ORNAMENTAL

Detailed instructions follow alphabetically, by site.

Unless otherwise specified, applications may be made to control any weeds listed in the "ANNUAL WEEDS," "PERENNIAL WEEDS," and "WOODY BRUSH AND TREES RATE TABLES" in this label. Refer also to the "SELECTIVE EQUIPMENT" section.

13.1 Cut Stumps

Cut stump treatments may be made on any site listed on this label. This product will control many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

Alder	Saltcedar
Eucalyptus	Sweetgum
Madrone	Tan oak
Oak	Willow
Reed, giant	

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

13.2 General Noncrop Areas and Industrial Sites

Use in areas such as airports, Christmas tree farms, ditch banks, dry ditches, dry canals, fencerows, golf courses, industrial sites, lumber yards, manufacturing sites, office complexes, ornamental nurseries, parking areas, petroleum tank farms and pumping installations, railroads, roadsides, sod or turf seed farms, storage areas, substations, ware-

house areas, other public areas, and similar industrial and noncrop sites.

General Weed Control, Trim-and-Edge and Bare Ground

This product may be used in general noncrop areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around objects in noncrop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product may be tank mixed with the following products. Refer to these products' labels for approved noncrop sites and application rates.

Arsenal	Pendulum™ 3.3 EC
Clarity	Pendulum WDG
Barricade™ 65WG	Plateau™
Diuron	Princep™ DF
Endurance™	Princep™ Liquid
Escort™	Ronstar™ 50WP
Garlon™ 3A	Sahara™
Garlon 4	Simazine
Karmex™ DF	Surflan™
Krovar™ I DF	Telar™
Manage®	Vanquish™
Gust	2,4-D

This product plus dicamba tank mixtures may not be applied by air in California.

When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees.

For control or partial control of the following perennial weeds, apply 22 to 44 fluid ounces of this product plus 2 to 4 ounces of Gust per acre.

Bahiagrass	Fescue, tall
Bermudagrass	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Quackgrass
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Chemical Mowing—Perennials

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 40 gallons of spray solution per acre.

Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Chemical Mowing—Annuals

For growth suppression of some annual grasses, such as annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 3 to 4 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

Bromus species and Medusahead in Pastures and Rangelands

Bromus species. This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus setcalinus*) found in industrial, rangeland and pasture sites.

Apply 6 to 11 fluid ounces of this product per acre on a broadcast basis.

For best results, treatment should coincide with early seed-head emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses can become reestablished on the site.

Medusahead. To treat medusahead, apply 11 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Applications to brome and medusahead may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre. When applied as directed in this label, there are no grazing restrictions.

Dormant Turfgrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant Bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring greenup.

Apply 6 to 44 fluid ounces of this product per acre. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where Bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 11 fluid ounces per acre may result in injury or delayed greenup in highly maintained areas, such as golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust in highly maintained turfgrass areas. For further uses, refer to the "ROADSIDES" section of this label, which gives rates for dormant Bermudagrass and bahiagrass treatments.

Actively Growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. DO NOT apply more than 11 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust in highly maintained turfgrass areas. For further uses, refer to the "ROADSIDES" section of this label, which gives rates for actively growing Bermudagrass treatments. Use only in areas where some temporary injury or discoloration can be tolerated.

Turfgrass Renovation, Seed, or Sod Production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted following the above procedures.

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

25

Do not feed or graze turfgrass grown for seed or sod production for 8 weeks following application.

13.3 Habitat Management

Habitat Restoration and Management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements. Spot treatments can be made to selectively remove unwanted plants for habitat management and enhancement.

Wildlife Food Plots

This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage to allow translocation into underground plant parts.

13.4 Injection and Frill (Woody Brush and Trees)

This product may be used to control woody brush and trees by injection or frill applications. Apply this product using suitable equipment that must penetrate into the living tissue. Apply the equivalent of $\frac{1}{2}$ fluid ounce (1 mL) of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frilled or cut areas

in species that exude sap freely. In species such as this, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent concentration of this product. For best results, application should be made during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below:

Control

Oak
Poplar
Sweetgum
Sycamore

Partial Control

Black gum
Dogwood
Hickory
Maple, red

13.5 Ornamentals, Plant Nurseries, and Christmas Trees

Post-Directed, Trim-and-Edge

This product may be used as a post-directed spray around established woody ornamental species such as arborvitae, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Site Preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

2/58

Wipers

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established eucalyptus or poplar trees. See the "SELECTIVE EQUIPMENT" section of this label for further information about the proper use of wiper applicators.

Greenhouse/Shadehouse

This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

13.6 Railroads

All of the instructions in the "GENERAL NONCROP AREAS AND INDUSTRIAL SITES" section apply to railroads.

Bare Ground, Ballast and Shoulders, Crossings, and Spot Treatment

This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used. This product may be tank mixed with the following products for ballast, shoulder, spot, bare ground and crossing treatments:

Arsenal	Krovar I DF
Clarity	Oust
Diuron	Sahara
Escort	Spike™
Garlon3A	Telar
Garlon 4	Vanquish
Hyvar™X	2,4-D

Brush Control

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 2.5 to 7 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a 0.7 to 1.5 percent solution of this product when using high-volume spray-to-wet applications. Apply a 4 to 7 percent solution of this product when using low volume directed sprays for spot treatment. This product may be mixed with the following products for enhanced control of woody brush and trees:

Arsenal	Garlon 4
Escort	Tordon™ X
Garlon 3A	

Bermudagrass Release

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 11 to 32 fluid ounces of this product in up to 80 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seed-head formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpet creeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust. If tank-mixed, use no more than 11 to 32 fluid ounces of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpet creeper
Dawberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications in the same season are not recommended, since severe injury may occur.

13.7 Roadsides

All of the instructions in the "GENERAL NONCROP AREAS AND INDUSTRIAL SITES" section apply to roadsides.

Shoulder Treatments

This product may be used on road shoulders. It may be applied with boom sprayers, shielded boom sprayers, high-volume off-center nozzles, hand-held equipment, and similar equipment.

Guardrails and other Obstacles to Mowing

This product may be used to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot Treatment

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

Tank Mixtures

This product may be tank-mixed with the following products for shoulder, guardrail, spot and bare ground treatments:

Clarity	Princep Liquid
Diuron	Ronstar 50WP
Endurance	Sahara
Escort	Simazine
Krovar I DF	Surflan
Oust	Telar
Pendulum 3.3 EC	Vanquish
Pendulum WDG	2,4-D
Princep DF	

See the "GENERAL NONCROP AREAS AND INDUSTRIAL SITES" section of this label for general instructions for tank mixing.

Release of Bermudagrass or Bahiagrass

Dormant Applications

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant Bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring greenup. This product may also be tank-mixed with Oust for residual control. Tank mixtures of this product with Oust may delay greenup.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4- to 6-leaf stage.

Apply 6 to 44 fluid ounces of this product per acre alone or in a tank mixture with 0.25 to 1 ounce per acre of Oust. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where Bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in green up and minimize injury, add no more than 1 ounce of Oust per acre on Bermudagrass and no more than 0.5 ounce of Oust per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

INDUSTRIAL AND NONCROP 100

Actively growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 11 to 32 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seed-head formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpet creeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust. If tank-mixed, use no more than 11 to 22 fluid ounces of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass
Broomsedge	Poorjoe
Dallisgrass	Trumpet creeper
Oack, curly	Vaseygrass
Dogfennel	Vervain, blue

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended, since severe injury may occur.

Actively growing Bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 40 gallons of water per acre. Apply 1 to 2 weeks after full green up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus Oust may be used. Apply 4 fluid ounces of this product plus 0.25 ounce of Oust per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

14.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species)

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE RECOMMENDED.

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 32 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE 102

ANNUAL WEEDS RATE TABLE

RATE

(fluid ounces per acre)

WEED SPECIES 11 16 22 27 32
Maximum height/length (in inches)

Ammannia, purple	3	6	12	18
Annoda, spurred	2	3	5	8
Barley	18	18		
Barnyardgrass	3	6	7	9
Bassia, fivehook	3	6		
Beggarweed, Florida	5	8		
Bittercress	12	20		
Bluegrass, annual	10			
Bluegrass, bulbous	6			
Brome, downy	6	12		
Brome, Japanese	6	12	24	
Browntop panicum	6	8	12	24
Buckwheat, wild	1	2		
Burcucumber	5	12		18
Buttercup	12	20		
Carolina geranium		4		9
Carpetweed	6	12		
Cheat	6	20		
Chervil	20			
Chickweed	12	18		
Cocklebur	12	18	24	36
Copperleaf, hophornbeam	2	4		6
Copperleaf, Virginia	2	4		6
Coreopsis, plains	6	12		18
Corn volunteer	6	12	20	
Corn speedwell	12			
Croton, grass	3	6	12	
Crowfootgrass		6		12
Cutleaf, evening primrose	3	3		6
Devilsclaw (unicorn plant)	3	6		
Dwarf dandelion	12			

Eastern manna grass	8	12		
Eclipta	4	8	12	
Fall panicum	4	6		12
Falsedandelion	20			
Falseflax, smallseed	12			
Fiddleneck	6	12		
Field pennycress	6	12		
Filaree	6	12		12
Fleabane, annual	6	20		
Fleabane, hairy				
(Conyza bonariensis)	6	6		10
Fleabane, rough	3	6	12	
Florida pusley		4		6
Foxtail, giant, bristly, yellow	6	12	20	
Foxtail, Carolina	10			
Foxtail, green	12			
Goatgrass, jointed	6	12		
Goosegrass	3	6		12
Grain sorghum (milo)	6	12	20	
Groundcherry	3	6		9
Groundsel, common	6	10		
Hemp sesbania	2	4	6	8
Hemlock	6			12
Horseweed/ Maretail				
(Conyza canadensis)	6	12		18
Ichgrass	6	8	12	18
Jimsonweed		12		18
Johnson grass, seedling	6	12	18	24
Junglerice	3	6	7	9
Knotweed		6		12
Kochia	3 to 6	12		
Lambsquarters	6	12		20
Little barley	6	12		
London rocket	6	24		
Mayweed	2	6	12	18
Morning glory, annual				
(Ipomoea spp.)	3			6

ANNUAL WEEDS RATE TABLE 103

262

ANNUAL WEEDS RATE TABLE 104

ANNUAL WEEDS RATE TABLE

WEED SPECIES	RATE (fluid ounces per acre)				
	11	16	22	27	32
	Maximum height/length (in inches)				
Mustard, blue	6	12	18		
Mustard, tansy	6	12	18		
Mustard, tumble	6	12	18		
Mustard, wild	6	12	18		
Nightshade, black		4	6		12
Nightshade, hairy		4	6		12
Oats	3	6	18		
Pigweed, species		12	18	24	
Prickly lettuce		6	12		
Purslane					6
Ragweed, common		6	12		18
Ragweed, giant		6	12		18
Red rice			4		
Rye, volunteer/cereal	6	18	18		
Ryegrass			6		12
Sandbur, field	6	12			
Sandbur, longspine	6	12			
Shattercane	6	12	20		
Shepherd's-purse	6	12			
Sicklepod		2	4		8
Signalgrass, broadleaf		3	6	7	9
Smartweed, ladythumb		6			9
Smartweed, Pennsylvania		6			9
Sowthistle, annual		6			12
Spanishneedles		6			12
Speedwell, purslane		12			
Sprangletop	6	12	20		
Spurge, prostrate		6	12		
Spurge, spotted		6	12		
Spurny, umbrella		6			

Stinkgrass		12			
Sunflower		12	18		
Swinecress		5	12		
Tea-weed/Prickly sida		2	4		6
Texas panicum	6	8	12		24
Thistle, Russian		6	12		
Velvetleaf		6			12
Virginia pepperweed		18			
Waterhemp			6		12
Wheat	6	12	18		
Wheat (overwintered)		6	12		18
Wild oats	3	6	18		
Wild proso millet		6	12		18
Witchgrass		12			
Woolly cupgrass		6	12		
Yellow rocket		12	20		

¹ For control of downy brome in no-till systems, use 16 fluid ounces per acre.

² Performance is better if application is made before this weed reaches the boot stage of growth.

³ Use 16 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fluid ounces followed by 22 fluid ounces of this product per acre.

⁴ Do not treat kochia in the button stage.

⁵ Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

26

14.1 Annual Weeds—Rates for 10 to 40 Gallons per Acre

Apply 22 to 44 fluid ounces of this product per acre. Use 22 fluid ounces per acre if weeds are less than 6 inches tall, 32 fluid ounces per acre if weeds are 6 to 12 inches tall and 44 fluid ounces per acre if weeds are greater than 12 inches tall. These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

14.2 Annual Weeds—Tank Mixtures with 2,4-D or Dicamba or Tordon 22K

8 to 11 fluid ounces of this product plus 0.25 pound of dicamba or 0.5 pound of 2,4-D or 1 to 2 fluid ounces of Tordon 22K per acre will control the following weeds with the maximum height or length indicated: 6 inches—prickly lettuce, marestail/horseweed, morningglory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12 inches—cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

11 fluid ounces of this product plus 0.5 pound of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf. Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

14.3 Annual Weeds—Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7 percent solution.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 4 percent solution for annual and perennial weeds and a 4 to 7 percent solution for woody brush and trees.

14.4 Annual Weeds—Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

16 to 20 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fluid ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 0.125 pound of dicamba for control).

15.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)

Apply to actively growing perennial weeds.

NOTE: If weeds have been mowed or killed, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

Alfalfa	1-1.5	3-10	1.5%
---------	-------	------	------

Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Alligatorweed	1-3	3-20	1%
---------------	-----	------	----

For partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain control.

Anise (fennel)			1-1.5%
----------------	--	--	--------

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Bahiagrass	2-3.3	3-20	1.5%
------------	-------	------	------

Apply when most plants have reached the early head stage.

Bentgrass	1-1.5	3-10-20	1.5%
-----------	-------	---------	------

For suppression in grass seed production areas. For ground appli-

cations only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.

Bermudagrass	2-3.3	3-20	1.5%
--------------	-------	------	------

For control, apply 3.3 quarts of this product per acre. For partial control, apply 64 fluid ounces per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.

Bermudagrass			
--------------	--	--	--

Water (knotgrass)	0.7-1	5-10	1.5%
-------------------	-------	------	------

Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only: Apply 22 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermudagrass that is 12 to 18 inches in length.

This product is not registered in California for use on water Bermudagrass.

Bindweed, field	0.4-3.3	3-20	1.5%
-----------------	---------	------	------

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

For control, apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Also for control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba in 10 to 20 gallons of water per acre. Do not apply by air.

For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product plus 1 pound of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

PERENNIAL WEEDS RATE TABLE 110

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 22 fluid ounces to 3.3 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky 0.7-1.5 3-40 1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Blueweed, Texas 2-3.3 3-40 1.5%

Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Brackenfern 2-3 3-40 1.5%

Apply to fully expanded fronds that are at least 18 inches long.

Bromegrass, smooth 0.7-1.5 3-40 1.5%

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly leaf 2-3 3-20 1.5%

For control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba per acre. For partial control, apply 22 fluid ounces of this product plus 0.5 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

Canarygrass, reed 1.5-2 3-40 1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

Cattail 2-3.3 3-40 1.5%

Apply when most plants have reached the early head stage.

Clover, red/white 2-3.3 3-20 1.5%

Apply when most plants have reached the early bud stage.

Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.

Cogongrass 2-3.3 10-40 1.5%

Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

Dallisgrass 2-3.3 3-20 1.5%

Apply when most plants have reached the early head stage.

Dandelion 2-3.3 3-40 1.5%

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dock, curly 2-3.3 3-40 1.5%

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dogbane, hemp 2-3 3-40 1.5%

Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.

260

PERENNIAL WEEDS RATE TABLE 112

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	----------------	-----------------------	-------------------------

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.

Fescue (except fall) 2-3.3 3-20 1.5%

Apply when most plants have reached the early head stage.

Fescue, fall 0.7-2 3-40 1.5%

Apply 64 fluid ounces of this product per acre when most plants have reached boot-to-early seedhead stage of development.

Fall applications only. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 11 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.

Guineagrass 1.5-2 3-40 1%

Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and ridge of Florida, use 44 fluid ounces for control. In the flatwoods region of Florida, 64 fluid ounces is required for control.

Horsenettle 2-3.3 3-20 1.5%

Apply when most plants have reached the early bud stage.

Horseradish 3 3-40 1.5%

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Iceplant 1.5-2 3-40 1.5-2%

Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.

Jerusalem artichoke 2-3.3 3-20 1.5%

Apply when most plants are in the early bud stage.

Johnsongrass 0.4-2 3-40 1%

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10

gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 22 fluid ounces of this product per acre.

For burndown of Johnsongrass, apply 11 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)—Apply a 0.7 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass 1.5-2 3-40 1.5%

Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

Knapweed 3 3-40 1.5%

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana 1 3-40 1%

Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Lespedeza 2-3.3 3-20 1.5%

Apply when most plants have reached the early bud stage.

Milkweed, common 2 3-40 1.5%

Apply when most plants have reached the late bud to flower stage of growth.

Muhly, wirestem 0.7-1.5 3-40 1.5%

Use 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

PERENNIAL WEEDS RATE TABLE 113

PERENNIAL WEEDS RATE TABLE 114

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

Mullein, common	2-3.3	3-20	1-1.5%
-----------------	-------	------	--------

Apply when most plants are in the early bud stage.

Napiergrass	2-3.3	3-20	1-1.5%
-------------	-------	------	--------

Apply when most plants are in the early head stage.

Nightshade, silverleaf	1.5	3-10	1-1.5%
------------------------	-----	------	--------

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge, purple or yellow	0.4-2	3-40	1-1.5%
----------------------------	-------	------	--------

Apply 64 fluid ounces of this product per acre or apply a 1 to 1.5 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 11 to 44 fluid ounces of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

Orchardgrass	0.7-1.5	3-40	1-1.5%
--------------	---------	------	--------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Orchardgrass sods going to no-till corn: Apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

Pampasgrass			1-1.5%
-------------	--	--	--------

Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass	2-3.3	3-20	1-1.5%
-----------	-------	------	--------

Apply when most plants are in the early head stage.

Phragmites	2-3.3	10-40	1-1.5%
------------	-------	-------	--------

For partial control and best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock			1-1.5%
----------------	--	--	--------

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Thorough coverage is necessary for best control.

Pokeweed, common		3-40	1.5%
------------------	--	------	------

Apply to actively growing plants up to 24 inches tall.

Quackgrass	0.7-2	3-40	1.5%
------------	-------	------	------

In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

268

PERENNIAL WEEDS RATE TABLE 117

For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

For best results, apply when most plants have reached the boot-to-head stage of growth.

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Timothy 1.5-2 3-40 1.5%
For best results, apply when most plants have reached the boot-to-head stage of growth.

Torpedograss 2.5-3.3 3-40 1.5%
For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

For best results, apply when most plants have reached the boot-to-head stage of growth.

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Thistle, Canada 1.5-2 3-40 1.5%
For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, arctic 1.5-2 3-40 1.5%
For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Sweet potato, wild 1.5-2 3-40 1.5%
For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Best results are obtained when applications are made during the rosette, booting and early flower stages.

Staircase, yellow 1.5-2 3-40 1.5%
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Spurge, leafy 3-10 3-40 1.5%
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Smartweed, swamp 2-3 3-40 1.5%
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Sowthistle, perennial 1.5-2 3-40 1.5%
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

For best results, apply when most plants have reached the boot-to-head stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Hydrat, perennial 0.7-2 3-40 1%
In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 1 quart of this product per acre.

Smartweed, swamp 2-3 3-40 1.5%
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Sowthistle, perennial 1.5-2 3-40 1.5%
For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

For best results, apply when most plants have reached the boot-to-head stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Need, giant 1.5-2 3-40 1.5%
Best results are obtained when applications are made in late summer to fall.

For suppression, apply 16 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 44 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Redvine 0.5-1.5 5-10 1.5%
In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

PERENNIAL WEEDS RATE TABLE 116

Weed Species Rate (oz/A) Volume (GPA) % Solution Hand-Held

PERENNIAL WEEDS RATE TABLE 118

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	-------------	--------------------	----------------------

Trumpet creeper 1.5 5-10 1.5%

For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Vaseygrass 2-3-3 3-20 1.5%

Apply when most plants are in the early head stage.

Velvetgrass 2-3-3 3-20 1.5%

Apply when most plants are in the early head stage.

Wheatgrass, western 1.5-2 3-40 1.5%

For best results, apply when most plants have reached the boot-to-head stage of growth.

16.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species)

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3-40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Rate (QT/A)	Hand-Held % Solution	Comments
--------------	-------------	----------------------	----------

PC=Partial Control; C=Control

Alder	2-3	1%	C
Ash	1.5-3.3	1-1.5%	PC
Aspen, quaking	1.5-2	1%	C
Bearmal (Bearclover)	1.5-3.3	1-1.5%	PC
Beech	1.5-3.3	1-1.5%	PC
Birch	1.5-2	1%	C

WOODY BRUSH AND TREES 120

Weed Species Rate (QT/A) Hand-Held % Solution Comments

PC=Partial Control; C=Control

Blackberry	2-3	1%	C
Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7 percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 to 2.5 quarts of this product in 10 to 40 gallons of water per acre.			
Blackgum	1.5-3.3	1-1.5%	C
Bracken	1.5-3.3	1-1.5%	C
Broom		1-1.5%	C
French, Scotch			
Buckwheat, California		1-1.5%	PC
Thorough coverage of foliage is necessary for best results.			
Cascara	1.5-3.3	1-1.5%	PC
Catsclaw		1%	PC
Ceanothus	1.5-3.3	1-1.5%	PC
Chamise		1%	C
Thorough coverage of foliage is necessary for best results.			
Cherry, bitter, black, pin	1.5-2	1%	C
Coyote brush		1-1.5%	C
Apply when at least 50 percent of the new leaves are fully developed.			
Dogwood	1.5-3.3	1-1.5%	PC
Elderberry	1.5-2	1%	C
Elm	1.5-3.3	1-1.5%	PC

Eucalyptus — 1.5% C

For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.

Florida holly (Brazilian Peppertree)	1.5-3.3	1-1.5%	PC
Gorse	1.5-3.3	1-1.5%	PC
Hasardier		1-1.5%	PC

Thorough coverage of foliage is necessary for best results.

Hawthorn	1.5-2	1%	C
Hazel	1.5-2	1%	C

Hickory	1.5-3.3	1-1.5%	PC
Honeysuckle	2-3	1%	C

Hornbeam, American	1.5-3.3	1-1.5%	PC
Kudzu	2.5-3.3	1.5%	C

Repeat applications may be required to maintain control.

Locust, black	1.5-3.3	1-1.5%	PC
Madrone resprouts		1.5%	PC

Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Manzanita	1.5-3.3	1-1.5%	PC
Maple, red	1.5-3	1%	C

Apply a 1 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 85 fluid ounces of this product per acre.

Maple, sugar — 1% C

Apply when at least 50 percent of the new leaves are fully developed.

Monkey flower — 1-1.5% PC

Thorough coverage of foliage is necessary for best results.

Oak, black, white	1.5-3	1-1.5%	PC
Oak, post	2-3	1%	C

WOODY BRUSH AND TREES 122

Weed Species	Rate (QT/A)	Hand-Meld % Solution	Comments
--------------	----------------	-------------------------	----------

PC=Partial Control; C=Control

Oak, northern 1% C

Apply when at least 50 percent of the new pin leaves are fully developed.

Oak, southern red 1.5-2 1% C

Persimmon 1.5-3.3 1-1.5% PC

Pine 1.5-3.3 1-1.5% C

Poison ivy/
Poison oak 2.5-3.3 1.5% C

Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

Poplar, yellow 1.5-3.3 1-1.5% PC

Redbud, eastern 1.5-3.3 1-1.5% C

Rose, multiflora 1.5 1% C

Treatments should be made prior to leaf deterioration by leaf-eating insects.

Russian olive 1.5-3.3 1-1.5% PC

Sage, black — 1% C

Thorough coverage of foliage is necessary for best results.

Sage, white 1.5-3.3 1-1.5% PC

Sage brush,
California — 1% C

Thorough coverage of foliage is necessary for best results.

Salmonberry 1.5-2 1% C

Salcedar 1.5-3.3 1-1.5% C

Sassafras 1.5-3.3 1-1.5% PC

Sourwood 1.5-3.3 1-1.5% PC

Sumac, poison,
smooth-winged 1.5-3 1-1.5% PC

Sweetgum 1.5-2 1% C

Swordfern 1.5-3.3 1-1.5% PC

Tallowtree, Chinese — 1% C

Thorough coverage of foliage is necessary for best results.

Tan oak resprouts 1.5% PC

Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.

Thimbleberry 1.5-2 1% C

Tobacco, tree — 1-1.5% PC

Trumpet creeper 1.5-2 1% C

Vine maple 1.5-3.3 1-1.5% PC

Virginia creeper 1.5-3.3 1-1.5% C

Waxmyrtle,
southern 1.5-3.3 1-1.5% PC

Willow 2-3 1% C

277

17.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

272

LIMIT OF WARRANTY 126

Amplify, Bullet, Degree, Degree Xtra, FarmSource, Harness, Lariat, Lasso, Manage, Micro-Tech, MON 007, Monsanto and the Vine symbol, Permit, Roundup Original, Roundup Ready, Roundup UltraMAX and Transorb are trademarks of Monsanto Technology LLC.

Assure, Authority, Canopy, Escort, Hyvar, Krovar, Leadoff, Lexone, Oust and Telar are trademarks of E. I. duPont de Nemours & Co. Inc.

Direx, Karmex, Linex and Lorox are trademarks of Griffin LLC.

Barricade, Bicep MAGNUM, Boundary, Dual MAGNUM, Endurance, Flexstar, Fusion, Princep Caliber, Rellex, Solicam and Vanquish are trademarks of Syngenta CropProtection Inc.

Firstate, Fulltime, Garlon, Python, Spike, Surflan, TopNotch and Tordon are trademarks of Dow AgroSciences LLC.

Arsenal, Banvel, Clarity, Distinct, Frontier, Guardsman, Marksman, Outlook, Pendulum, Plateau, Provil, Pursuit, Pursuit Plus, Sahara, Scepter, Squadron and Steel are trademarks of BASF Corp.

Balance, Follex, Ginstar, Prep, and Ronstar are trademarks of Aventis CropSciences.

Goal is a trademark of Rohm and Haas Company.

Axiom, DEF, Domain, Epic and Sencor are trademarks of Bayer Crop Protection.

Aim, Command and Gauntlet are trademarks of FMC Corporation.

Devrinol is a trademark of United Phosphorus Inc.

Sim-Trol is a trademark of Sipcam Agro USA, Inc.

Valor is a trademark of Valent USA Corporation.

This page left blank intentionally.

274

This product is protected by U.S. Patent Nos.
5,688,085 and 5,365,551. Other patents pending.
No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-537

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

MONSANTO



©2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167 USA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

OCT 2 2002

I, Jim Tompkins, Product Manager of Team Number 25, Herbicide Branch, Registration Division, Office of Pesticide Programs, Office of Prevention, Pesticides and Toxic Substances, United States Environmental Protection Agency ("EPA"), confirm that the pesticide product listed below is of the date of this letter, registered with EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and that accordingly, the product may be sold and marketed in the United States of America as authorized and limited by FIFRA. A true and correct copy of the product label approved by EPA is attached to accompany this letter.

Registration of the product(s) with EPA also denotes that the registrant listed below is responsible for ensuring full compliance with laws of the United States of America or governing jurisdiction, regarding the sale, storage and/or disposal of the product(s). Further, the recipient of this letter is on notice that the status of the referenced registration and/or the accompanying label may change subsequent to the date of this letter. EPA assumes no responsibility to notify any recipient of this letter of any change in the status of the registration(s) and/or the product label for the product(s) listed below.

EPA has issued a registration number for the product listed below to

Monsanto Company
600 13th Street, NW
Washington, DC 20005

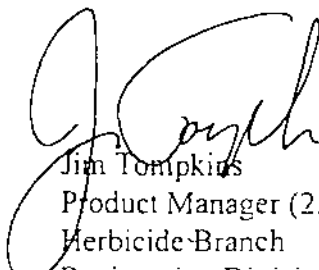
EPA Reg. No. _____

524-537

Product Name

MON 78270 Herbicide




Jim Tompkins
Product Manager (25)
Herbicide Branch
Registration Division

2/16

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). (If not exempted by 40 CFR 152.81 (b) (4));
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

977

ROUNDUP WEATHERMAX

Herbicide

Complete Directions for Use

EPA Reg. No. 524-537

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready® Crops.

Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many cropping systems, farmsteads and Conservation Reserve Program acres.

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Read the entire label before using this product.

Use only according to label instructions.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

CONTENTS

- 1 1.0 INGREDIENTS
- 2 2.0 IMPORTANT PHONE NUMBERS
- 3 3.0 PRECAUTIONARY STATEMENTS
 - 3.1 Hazards to Humans and Domestic Animals
 - 3.2 Environmental Hazards
 - 3.3 Physical or Chemical Hazards
- 4 4.0 STORAGE AND DISPOSAL
- 5 5.0 GENERAL INFORMATION
(How This Product Works)
- 6 6.0 MIXING
 - 6.1 Mixing with Water

NOTIFICATION

MAY 7 2002

- 6.2 Tank Mixing Procedure
- 6.3 Mixing for Hand-Held Sprayers
- 6.4 Ammonium Sulfate
- 6.5 Colorants or Dyes
- 6.6 Drift Control Additives
- 7 7.0 **APPLICATION EQUIPMENT AND TECHNIQUES**
 - 7.1 Aerial Equipment
 - 7.2 Ground Broadcast Equipment
 - 7.3 Hand-Held or High-Volume Equipment
 - 7.4 Selective Equipment
 - 7.5 Injection Systems
 - 7.6 CDA Equipment
- 8 8.0 **ANNUAL AND PERENNIAL CROPS (Alphabetical)**
 - 8.1 Cereal and Grain Crops
 - 8.2 Corn
 - 8.3 Cotton
 - 8.4 Fallow Systems
 - 8.5 Grain Sorghum (Milo)
 - 8.6 Herbs and Spices
 - 8.7 Oil Seed Crops
 - 8.8 Soybeans
 - 8.9 Sugarcane
 - 8.10 Vegetable Crops
 - 8.11 Miscellaneous Crops
- 9 9.0 **TREE, VINE, AND SHRUB CROPS (Alphabetical)**
 - 9.1 Berry Crops
 - 9.2 Citrus
 - 9.3 Miscellaneous Tree Food Crops
 - 9.4 Non-Food Tree Crops
 - 9.5 Pome Fruit
 - 9.6 Stone Fruit
 - 9.7 Tree Nuts
 - 9.8 Tropical and Subtropical Trees and Fruits
 - 9.9 Vine Crops
- 10 10.0 **PASTURE GRASSES, FORAGE LEGUMES, AND RANGELANDS**
 - 10.1 Alfalfa, Clover, and Other Forage Legumes
 - 10.2 Conservation Reserve program (CRP)
 - 10.3 Grass Seed Production
 - 10.4 Pastures
 - 10.5 Rangelands
 - 10.6 Turf Grass Sod Production
- 11 11.0 **ROUNDUP READY CROPS**
 - 11.1 Canola with the Roundup Ready Gene
 - 11.2 Corn with the Roundup Ready Gene
 - 11.3 Cotton with the Roundup Ready Gene
 - 11.4 Soybeans with the Roundup Ready Gene
 - 11.5 Sugar beets with the Roundup Ready Gene
- 12 12.0 **NON-CROP USES AROUND THE FARMSTEAD**

- 12.1 General Weed Control and Trim-And-Edge
- 12.2 Greenhouse/Shadehouse
- 12.3 Chemical Mowing
- 12.4 Cut Stumps
- 12.5 Habitat Management
- 13 13.0 ANNUAL WEEDS RATE TABLE**
(Alphabetically by Species)
 - 13.1 Annual Weeds -- Rates for 10 to 40 GPA
 - 13.2 Annual Weeds -- Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K
 - 13.3 Annual Weeds -- Hand-Held or High-Volume Equipment
 - 13.4 Annual Weeds - Tank Mixtures with Atrazine
for Fallow and Reduced Tillage Systems
- 14 14.0 PERENNIAL WEEDS RATE TABLE**
(Alphabetically by Species)
- 15 15.0 WOODY BRUSH AND TREES RATE TABLE**
(Alphabetically by Species)
- 16 16.0 LIMIT OF WARRANTY AND LIABILITY**

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt 48.8%

OTHER INGREDIENTS: 51.2%
100.0%

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,688,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT,
CALL TOLL-FREE,

1-800-332-3111

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL
ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

FIRST AID: Call a poison control center or doctor for treatment advice.

- | | |
|-------------------|---|
| IF IN EYES | <ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.• Remove contact lenses if present after the first 5 minutes then continue rinsing eye. |
| IF ON SKIN | <ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 - 20 minutes. |
| IF INHALED | <ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. |

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as Roundup WeatherMAX herbicide, **EPA Registration No. 524-537**. You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks and chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

See container label for STORAGE AND DISPOSAL instructions.

5.0 GENERAL INFORMATION

(How This Product Works)

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when Roundup WeatherMAX herbicide is the only pesticide used unless otherwise directed. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of this label for instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" for recommendations for specific weeds.

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Do not treat weeds with disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds under poor growing conditions or that are heavily covered with dust.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5.3 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

6.0 MIXING

Use the following conversion table to help determine application rates of Roundup WeatherMAX herbicide based on commonly used rates of Roundup Original™ and Roundup UltraMAX™ herbicides.

NOW EVEN MORE CONCENTRATED ROUNDUP WEATHERMAX CONVERSION TABLE

Roundup Roundup Roundup

WeatherMAX (Ounces)	UltraMAX (Ounces)	Original (Ounces)
16	20	24
22	26	32
27	32	40
32	40	48

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "Tank Mixing" section of "GENERAL INFORMATION" for additional precautions.

6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Desired Volume	Amount of Roundup WeatherMAX					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	0.5 oz	1 oz	1.3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.7 qt	1 qt	1.5 qt	4 qt	7 qt
100 gal	1.6 qt	2.8 qt	1 gal	1.5 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank mixed with certain residual herbicides, on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

6.5 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's recommendations.

6.6 Drift Control Additives

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When a drift control additive is used, read and carefully

observe the cautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial--Fixed Wing and Helicopter

Ground Broadcast Spray--Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment--Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment--Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems--Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA)--Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 22 fluid ounces per acre. Refer to the individual use area sections of this label for recommended volumes, application rates, and further instructions.

FOR AERIAL APPLICATION IN CALIFORNIA OR SPECIFIC COUNTIES THEREIN, OR IN ARKANSAS, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE OR COUNTY FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

This product plus dicamba tank mixtures may not be applied by air in California.

Ensure uniform application-To avoid streaked, uneven or overlapped application, use appropriate marking devices.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the "Wind", "Temperature and Humidity", and "Temperature Inversions" sections of this label).

Controlling Droplet Size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom length:** For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 miles per hour. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 miles per hour due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The product should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Avoid direct application to any body of water.

Aircraft Maintenance

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

7.2 Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "ANNUAL WEEDS -- HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of this product label.

7.4 Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on this label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Recirculating Spray System

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Shielded and Hooded Applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. A single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Spray volume should be 20-30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.

- Leave at least an 8-inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 miles per hour to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 miles per hour.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

Wiper applicators

When applied under the conditions described in the following paragraphs, this product **CONTROLS** many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, spanishneedles and bristly starbur; and **SUPPRESSES** many weeds including Florida beggarweed, Bermudagrass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, velvetleaf.

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 miles per hour. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators-- Solutions ranging from 33 to 75 percent of this product in water may be used. Apply this solution to weeds listed above in this section.

For Panel Applicators--Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

7.6 CDA Equipment

281

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 miles per hour (1 quart per acre). For the control of perennial weeds, apply a 20 to 30 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 miles per hour (2 to 3 quarts per acre).

Controlled droplet application equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN SECTION 8 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label or separately published Monsanto Supplemental Labeling for instructions for treating Roundup Ready crops.

TYPES OF APPLICATIONS:

Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, At-Planting, Hooded Sprayers in row-middles, Shielded Sprayers in row-middles; Wiper Applicators in row-middles, and Post-Harvest treatments.

GENERAL USE INSTRUCTIONS:

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" in this label. Repeat applications may be made up to a maximum of 5.3 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers

must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

8.1 Cereal and Grain Crops

LABELED CROPS: Barley, Buckwheat, Millet (pearl, proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all types), Wild Rice.

PRECAUTIONS, RESTRICTIONS: Do not treat rice fields or levees when field contains water.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Wiper Applications Over-the-Top (Feed Barley and Wheat only), Preharvest (Feed Barley and Wheat only).

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

Red Rice Control Prior to Planting Rice

USE INSTRUCTIONS: Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

PRECAUTIONS, RESTRICTIONS: Avoid spraying during low humidity conditions, as reduced control may result. Do not treat rice fields or levees when the fields contain floodwater. Do not re-flood treated fields for 8 days following application.

Spot Treatment (except Rice)

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Wiper Applications Over-the-Top (Feed Barley and Wheat only)

USE INSTRUCTIONS: Wiper applications may be used in feed barley and wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, and when the rye is at least 6 inches above the wheat crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applicators.

Preharvest (Feed Barley and Wheat only)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of feed barley or wheat. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. Stubble may be grazed immediately after harvest.

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.2 Corn

TYPES OF CORN: Field Corn, Seed Corn, Silage Corn, Sweet Corn and Popcorn.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest.

For Roundup Ready corn, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D	Distinct™	Lariat®
Aim™	Dual Magnum™	Lasso®/Alachlor
Atrazine	Dual II Magnum™	Linex™/Lorox™
Axiom™	Epic™	Marksman™
Balance™	Frontier™/Outlook™	Micro-Tech®
Banvel™/Clarity™	Fultime™	Prowl™
Bicep Magnum™	Guardsman™/Leadoff™	Python™
Bicep II Magnum™	Harness®	Simazine
Bullet®	Harness Xtra	Tõpnotch™
Degree®	Harness Xtra 5.6l	
Degree Xtra®		

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this recommendation includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS, RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fluid ounces of this product per acre for each application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 Cotton

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Selective Equipment, Spot Treatment, Preharvest.

For Roundup Ready cotton, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

Hooded Sprayer, Selective Equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to boll opening of cotton.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" sections of this label. For cotton regrowth inhibition, apply 11 to 44 fluid ounces of this product per acre.

Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank mixed with DEFTM 6, FolexTM, Ginstar, or PrepTM to provide additional enhancement of cotton leaf drop.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

8.4 Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label. ~

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Aid-to-Tillage.

Chemical Fallow

USE INSTRUCTIONS: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting. Do not apply dicamba tank mixtures by air in California.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba is applied within 45 days of planting.

Preplant Fallow Beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product will control weeds listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" sections of this label.

TANK MIXTURES: In addition, 8 fluid ounces of this product plus 2 to 3 fluid ounces of Goal™ 2XL per acre will control the following weeds with the maximum height or length indicated: 3 inches -- common cheeseweed, chickweed, groundsel; 6 inches -- London rocket, shepherd's-purse.

11 fluid ounces of this product plus 2 to 3 fluid ounces of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 6 inches -- common cheeseweed, groundsel, maretail (*Conyza canadensis*), 12 inches -- chickweed, London rocket, shepherd's-purse.

Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS, RESTRICTIONS: Tank mixtures with residual herbicides may result in reduced performance.

8.5 Grain Sorghum (Milo)

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications, Preharvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tank-mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

Atrazine	Lariat
Bicep II Magnum	Lasso
Bullet	Micro-Tech
Dual II Magnum	

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

Spot Treatment and Over-the-Top Wiper Applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this label.

PRECAUTIONS, RESTRICTIONS: For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

PRECAUTIONS, RESTRICTIONS: Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 22 fluid ounces of this product per acre per application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Preharvest

USE INSTRUCTIONS: Make applications at 30 percent grain moisture or less.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 Herbs and Spices

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Over-the-Top Wiper Applications (Peppermint and Spearmint only), Spot Treatments (Peppermint and Spearmint only)

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system.

Over-the-top Wiper Applications or Spot Treatments (Peppermint and Spearmint only)

USE INSTRUCTIONS: This product may be used as a spot treatment or wiper application in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. In wiper applications, the applicator should be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10 percent of the total field area to be harvested should be treated at one time. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason. In wiper applications, contact of the herbicide solution with the crop may result in damage or destruction.

8.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

For Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATIONS: Those listed in Section 8.0.

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops. Broadcast applications must be made prior to emergence of the listed oil seed crops. Wiper applicators or hooded sprayers may be used between the rows once the crop is established.

TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre on canola. Do not apply more than 22 fluid ounces of this product per acre for sunflowers as a single preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

8.8 Soybeans

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest, Selective Equipment.

For Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water per acre.

Aim	Dual II Magnum	Micro-Tech
Amplify™	Firstate™	Prowl
Assure II™	Flexstar™	Pursuit™
Authority™	Frontier/Outlook	Pursuit Plus
Boundary™	Fusion™	Reflex™
Canopy™	Gauntlet™	Scepter™
Canopy XL™	Lasso	Sencor™/Lexone™
Command™	Linex	Squadron™
Command Xtra™	Lorox/Linuron	Steel™
Domain™	Lorox Plus	Valor™
Dual Magnum		

This product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this

product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: Tank-mixtures with some of the above listed herbicides may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES". This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 3.3 quarts per acre of this product for preharvest applications. Do not apply more than 44 fluid ounces per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

Selective Equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

8.9 Sugarcane

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus Spot Treatment.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.

PRECAUTIONS, RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

PRECAUTIONS, RESTRICTIONS: Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

Fallow Treatments

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 2.5 to 3.3 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Ground or aerial application equipment may be used. Applications up to 64 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of sugarcane. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

PRECAUTIONS, RESTRICTIONS: Do not allow treated weeds to come into contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

8.10 Vegetable Crops

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in row-middles, Shielded Sprayers in row-middles, Wiper Applications in row-middles, and Post-Harvest, Directed Applications (nonbearing ginseng), Over-the-Top Wipers (rutabagas only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this

product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

8.10.1 Brassica Vegetables

LABELED CROPS: Broccoli, Chinese broccoli (gai lan), Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens.

8.10.2 Bulb Vegetables

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot.

8.10.3 Cucurbit Vegetables and Fruits

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Melons (all), Momordica spp (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ball melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon.

PRECAUTIONS, RESTRICTIONS: For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all), Muskmelon, Persian melon, Pumpkin, Squash (summer, winter), and Watermelon, allow at least 3 days between application and planting.

8.10.4 Leafy Vegetables

LABELED CROPS: Amaranth (Chinese spinach), Arugula (roquette), Beet greens, Cardoon, Celery, Chinese celery, Celtuce, Chaya, Chervil, Edible-leaved chrysanthemum, Garland chrysanthemum, Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kag, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Vine spinach, Swiss chard, Watercress (upland), Water spinach.

PRECAUTIONS, RESTRICTIONS: For Watercress, avoid applications within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.

8.10.5 Fruiting Vegetables

LABELED CROPS: Eggplant, Groundcherry (Physalis spp), Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato

PRECAUTIONS, RESTRICTIONS: For Eggplant, Ground cherry, Pepper (all), and Tomatillo, allow at least 3 days between application and planting. For Tomato, do not make hooded or shielded sprayer applications in row middles because of the potential for crop injury.

8.10.6 Legume Vegetables (succulent or dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil, Pea (*Pisum*: includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean.

8.10.7 Root and Tuber Vegetables

LABELED CROPS: Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celeriac, Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Galangal, Ginger, Ginseng, Horseradish, Leren, Kava (turnip-rooted), Parsley (turnip rooted), Parsnip, Potato, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Skirret, Sweet potato, Tanier, Turmeric, Turnip, Wasabi, Yacon, Yam bean, True yam.

Directed Applications (Non-bearing Ginseng only)

USE INSTRUCTIONS: This product may be used for general weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.

PRECAUTIONS, RESTRICTIONS: Direct applications so that there is no contact of this product with the ginseng plant. Applications must be made at least one year prior to harvest.

Over-the-Top Wiper Applications (Rutabagas only)

USE INSTRUCTIONS: Wiper applicators may be used over-the-top of rutabagas.

PRECAUTIONS, RESTRICTIONS: Allow at least 14 days between application and harvest of rutabagas.

8.11 Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: General Weed Control, Site Preparation, Spot Treatment (Asparagus)

For Roundup Ready sugar beets, see the "ROUNDUP READY CROPS" section of this label.

PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

General Weed Control, Site Preparation

USE INSTRUCTIONS: This product may be applied for general weed control or for site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

Spot Treatment (Asparagus)

USE INSTRUCTIONS: This product may be applied immediately after cutting, but prior to the emergence of new spears.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

Post-Harvest (Asparagus)

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS, RESTRICTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select and use recommended types of spray equipment for postemergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

9.0 TREE, VINE, AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE, AND SHRUB CROPS WITHIN SECTION 9 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles (between rows of trees, vines or bushes), Strips (within rows of trees, vines or bushes), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, CDA equipment, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

GENERAL USE INSTRUCTIONS:

This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for general weed control or perennial grass suppression in established tree fruit and nut groves, orchards, berries, and vineyards. It may also be used for site preparation prior to planting or transplanting these crops. Apply 11 fluid ounces to 3.3 quarts per acre according to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" sections of this label. Utilize rates at the higher end of the recommended rate range.

when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) should be used to minimize the potential for leakage or drift of herbicide sprays onto crop. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wipers or shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

Allow a minimum of 3 days between application and transplanting.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

TANK MIXTURES: A tank mixture of this product plus Goal 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). 11 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control common cheeseweed (malva) or hairy fleabane with a maximum height or diameter of 3 inches.

Strips (in rows)

TANK MIXTURES: This product may be applied in rows of tree or vine crops in tank mixtures with the following products:

Devrinol™ 50 DF	Simazine 4L
Direx™ 4L	Simazine 80W
Goal 2XL	Sim-Trol™ 4L
Karmex™ DF	Solicam™ DF
Krovar™ I	Surflan™ AS
Psowl	Surflan 75W
Princep Caliber™ 90	

Do not apply these tank mixtures in Puerto Rico.

Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial Grass Suppression

This product will suppress perennial grasses such as bahiagrass, Bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 22 to 44 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4 to 11 fluid ounces of this product per acre east of the Rocky Mountains and 11 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4 to 7 fluid ounces of this product per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

Cut Stump

USE INSTRUCTIONS: Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor.

Fruit Trees: Apple, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio, Walnut (black, English).

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface

immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

PRECAUTIONS, RESTRICTIONS: DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

9.1 Berry Crops

LABELED CROPS: Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Salal.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Spot Treatment in Cranberry Production and Post-Harvest Treatments in Cranberry Production.

PRECAUTIONS, RESTRICTIONS: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes, or foliage. Allow a minimum of 30 days between last application and harvest in cranberries. Allow a minimum of 14 days between last application and harvest in other berry crops. Do not make directed sprays within the cranberry bush areas prior to berry harvest.

Spot Treatment in Cranberry Production

USE INSTRUCTIONS: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 1.5 percent solution of this product. Spray to wet vegetation, not to run-off.

PRECAUTIONS, RESTRICTIONS: For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium- to large-sized droplets to minimize drift in order to avoid crop injury.

Post-Harvest Treatments in Cranberry Production

USE INSTRUCTIONS: Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.4 to 0.7 percent solution of this product. Spray to wet vegetation, not to run-off. If using hand-held boom sprayers, apply 44 to 86 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Make applications only after cranberries have been harvested. Do not treat more than 10 percent of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with

desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

9.2 Citrus

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (all), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS (The recommendations below pertain to applications in Florida and Texas):
For burndown or control of the weeds listed below, apply the recommended rates of this product in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

For goatweed, apply 44 to 64 fluid ounces of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 44 fluid ounces per acre when plants are less than 8 inches tall and 64 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar I or Karmex may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial weeds:

S = Suppression
PC = Partial control

B = Burndown
C = Control

WEED SPECIES	ROUNDUP WEATHERMAX RATE PER ACRE			
	0.7 QT	1.3 QT	2 QT	3.3 QT
Bermudagrass	B	--	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	--	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	--	PC	C

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in citrus crops. For citron groves, apply as directed sprays only.

9.3 Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil).

TYPES OF APPLICATIONS: Those listed in Section 9.0.

9.4 Non-food Tree Crops

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other nonfood tree crops.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

Directed Sprays, Spot Treatment, Wipers

USE INSTRUCTIONS: This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

PRECAUTIONS, RESTRICTIONS: Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. **THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.**

Site Preparation

USE INSTRUCTIONS: This product may be used prior to planting Christmas trees.

PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect nontarget plants during site preparation applications.

9.5 Pome Fruit

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in pome crops.

9.6 Stone Fruit

LABELED CROPS: Apricot, Cherry (sweet, tart), Nectarine, Olive, Peach, Plum/Prune (all types), Plumcot.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

Restrictions on Application Equipment

For cherries, any application equipment listed in Section 9.0 may be used in all states.

Any application equipment listed in Section 9.0 may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states, use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. **EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.**

9.7 Tree Nuts

LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (black, English)

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconut.

9.8 Tropical and Subtropical Trees and Fruits

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Ilama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Bananacide (banana only).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya, and plantain crops. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

Bananacide (Banana only)

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 0.5 fluid ounce (15 mL) of this product's concentrate per mat (or unit). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for general weed control.

9.9 Vine Crops

LABELED CROPS: Grapes (raisin, table, wine) Hops, Kiwi, Passion fruit.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: Applications should not be made when green shoots, canes or foliage are in the spray zone.

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest in vine crops. Do not use selective equipment in kiwi.

10.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

10.1 Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-planting, Preharvest (Alfalfa only), Spot Treatment or Wiper Applications (Alfalfa and Clover only), Renovation.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: If a single application is made at rates of 44 fluid ounces per acre or less, no waiting period between treatment and feeding or grazing is required. If applications rates greater than 44 fluid ounces per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre as a preharvest treatment. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot Treatment or Wiper Applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application. If application rates of 44 fluid ounces per acre or less are used wait 36 hours after application before grazing or harvesting. If application rates greater than 44 fluid ounces per acre are used, wait 8 weeks between applications and grazing or harvesting.

10.2 Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), Site Preparation, Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications.

Renovation (rotating out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.

Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 11 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

10.3 Grass Seed Production

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS".

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Shielded Sprayers, Wiper Applications, Spot Treatments, Creating Rows in Annual Ryegrass.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production. Applications must be made prior to the emergence of the crop to avoid crop injury. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.

PRECAUTIONS, RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

Do not feed or graze treated areas for 8 weeks following application.

Shielded Sprayers

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.

PRECAUTIONS, RESTRICTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications

PRECAUTIONS, RESTRICTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

Spot Treatments

USE INSTRUCTIONS: Use a 1 percent solution.

PRECAUTIONS, RESTRICTIONS: Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field area. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 11 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS, RESTRICTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

Grower assumes all responsibility for crop losses from misapplication.

10.4 Pastures

LABELED CROPS: Any grass (*Gramineae* family) except Corn, Sorghum, Sugarcane and those listed above under "CEREAL CROPS", including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuya grass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

TYPES OF APPLICATIONS: Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Application.

Preplant, Preemergence and Pasture Renovation

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Spot Treatment and Wiper Application

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total pasture area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

10.5 Rangelands

TYPES OF APPLICATIONS: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Postemergence

USE INSTRUCTIONS: Apply 8 to 11 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 11 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

PRECAUTIONS, RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product. Do not make more than one application per year.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

10.6 Turf Grass Sod Production

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Spot Treatment.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for seed or sod. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control.

Desirable turf grasses may be planted following the above procedures.

PRECAUTIONS, RESTRICTIONS:

Do not feed or graze turf grass grown for seed or sod production for 8 weeks following application.

Spot Treatment

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Monsanto Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to crop varieties that are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain the Roundup Ready gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier or Monsanto representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready crop by applying glyphosate to the weeds and Roundup Ready crop are protected under several U.S. Patents, including 5,352,605 and 5,633,435. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing the Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing the Roundup Ready trait cannot be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For aerial applications, apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

For proper stewardship of aerial applications over-the-top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide "A Guide to On-Target Aerial Application" available by calling 1-800-ROUNDUP (1-800-768-6387) or on the internet at www.FARMSOURCE™.com.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

See the "MIXING" and "APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise noted in this product label, supplemental labeling or fact sheets published separately by Monsanto.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 Canola with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY CANOLA MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Preplant, At-planting, Preemergence applications	44 fluid ounces per acre
Total in-crop application from emergence to 6-leaf stage	22 fluid ounces per acre

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting canola.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Weeds Controlled: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

Single Application - Apply 11 to 16 fluid ounces per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and or growth reduction. Similar injury may result when applications of more than 11 fluid ounces per acre are applied after the 4-leaf stage.

Sequential Application - Apply 11 fluid ounces per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as Canada thistle and quackgrass or when controlling weeds with multiple application times.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 22 fluid ounces per acre. Allow a minimum of 60 days between last application and canola harvest.

11.2 Corn with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (in-crop), Spot Treatment, Preharvest, Post-Harvest.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	44 fluid ounces per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	22 fluid ounces per acre

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn.

TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines - the more restrictive requirements apply.

NOTE: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above.

Postemergence (in-crop)

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The postemergent application of 16 to 22 fluid ounces per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 16 to 22 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit® and atrazine at labeled rates. Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines - the more restrictive requirements apply.

Tank-mix Partner	Maximum Height Of Corn For Application
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6	11 inches
Bullet* Micro-Tech*	5 inches
Permit	30 inches
Atrazine	12 inches

*Bullet and Micro-Tech are not registered for use as a postemergence application in Texas.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Single in-crop applications of this product are not to exceed 22 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 44 fluid ounces per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

Preharvest

USE INSTRUCTIONS: In Roundup Ready corn, up to 22 fluid ounces per acre of this product can be applied preharvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

11.3 Cotton with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Over-the-Top, Selective Equipment, Preharvest.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to layby	2.5 quarts per acre
Maximum preharvest application rate	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 4 quarts per acre. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN TWO APPLICATIONS SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton.

Over-the-Top

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to 22 fluid ounces per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

Salvage Treatment. This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 22 fluid ounces per acre of this product may be applied

either as an over-the-top applications or as a post-directed treatments sprayed higher on the cotton plants and over the weeds. **NOTE:** SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.

NOTE: For specific rates of application and instructions, refer to the "ANNUAL" and "PERENNIAL WEEDS RATE TABLES" in this booklet.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Selective Equipment

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fluid ounces per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Preharvest

USE INSTRUCTIONS: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

11.4 Soybeans with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence, Preharvest, Post-Harvest.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY SOYBEANS MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE ACCEPTED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>

Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from cracking throughout flowering	64 fluid ounces per acre
Maximum preharvest application rate	22 fluid ounces per acre

PRECAUTIONS/RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting soybeans.

Postemergence

USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate recommendations for specific annual weeds. In general, an initial application of 22 fluid ounces per acre on 2 to 8 inch tall weeds is recommended. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 44 fluid ounces per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

A 22- to 44-fluid-ounce per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsetail, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpet creeper, swamp smartweed and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. **IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP.** To control giant ragweed, it is recommended that 22 fluid ounces per acre of this product be applied when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

PRECAUTIONS, RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering is 44 fluid ounces per acre.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans. Up to 22 fluid ounces per acre of this product can be applied by aerial or ground application.

PRECAUTIONS, RESTRICTIONS: Care should be taken to avoid excessive seed shatter loss due to ground application equipment. Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

11.5 Sugar Beets with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Emergence to 8-leaf stage	56 fluid ounces per acre
Between 8-leaf stage and canopy closure	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces per acre. Allow a minimum of 30 days between last application and sugar beet harvest.

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready sugar beets.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergent over-the-top to Roundup Ready sugar beets from emergence to 30 days prior to harvest. To maximize yield potential spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. Refer to the "ANNUAL WEEDS RATE TABLES" in this label for rate recommendations for specific annual weeds. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

12.0 NON-CROP USES AROUND THE FARMSTEAD

TYPES OF APPLICATIONS: General Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stumps, Habitat Management.

12.1 General Weed Control and Trim-And-Edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

TANK MIXTURES: This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and

44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS -- HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for recommended rates.

Arsenal
Banvel/Clarity
Barricade™ 65WG
Diuron
Endurance™
Escort™
Karmex DF
Krovar I DF
Oust™
Pendulum 3.3 EC
Pendulum WDG

Plateau
Princep DF
Princep Liquid
Ronstar 50 WP
Sahara
Simazine
Surflan
Telar™
Vanquish™
2,4-D

This product plus dicamba tank mixtures may not be applied by air in California.

12.2 Greenhouse/Shadehouse

This product may be used to control weeds in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

12.3 Chemical Mowing

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 11 fluid ounces of this product per acre when treating Bermudagrass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads. — —

PRECAUTIONS, RESTRICTIONS: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 Cut Stumps

TYPES OF APPLICATION: Treating cut stumps in any non-crop site listed on this label

USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion

Alder
Eucalyptus
Madrone
Oak
Pepper, brazilian
Pine, Austrian

Reed, giant
Saltcedar
Sweetgum
Tan oak
Willow

PRECAUTIONS, RESTRICTIONS: Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

12.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance, Wildlife Food Plots.

Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.

Wildlife Food Plots

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

13.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species)

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE RECOMMENDED.

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 32 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

RATE

WEED SPECIES	(fluid ounces per acre)				
	11	16	22	27	32
	Maximum height/length (in inches)				
Ammannia, purple	3	6	12	-	18
Annoda, spurred	-	2	3	5	8
Barley	18	18 +	-	-	-
Barnyardgrass	-	3	6	7	9
Bassia, fivehook	-	-	6	-	-
Beggarweed, Florida	-	5	8	-	-
Bittercress	12	20	-	-	-
Bluegrass, annual	10	-	-	-	-
Bluegrass, bulbous	6	-	-	-	-
Brome, downy ^{1,2}	6	12	-	-	-
Brome, Japanese	6	12	24	-	-
Browntop panicum	6	8	12	-	24
Buckwheat, wild ³	-	1	2	-	-
Burcucumber	-	6	12	-	18
Buttercup	12	20	-	-	-
Carolina geranium	-	-	4	-	9
Carpetweed	-	6	12	-	-
Cheat ²	6	20	-	-	-
Chervil	20	-	-	-	-
Chickweed	-	12	18	-	-
Cocklebur	12	18	24	-	36
Copperleaf, hophornbeam	-	2	4	-	6
Copperleaf, Virginia	-	2	4	-	6
Coreopsis, plains	-	6	12	-	18
Corn, volunteer	6	12	20	-	-

Corn speedwell	12	-	-	-	-
Crabgrass	3	6	12	-	-
Crowfootgrass	-	-	6	-	12
Cutleaf evening primrose	-	-	3	-	6
Devilsclaw (unicorn plant)	-	3	6	-	-
Dwarf dandelion	12	-	-	-	-
Eastern mannagrass	8	12	-	-	-
Eclipta	-	4	8	12	-
Fall panicum	4	-	6	-	12
Falsedandelion	-	20	-	-	-
Falseflax, smallseed	12	-	-	-	-
Fiddleneck	-	6	12	-	-
Field pennycress	6	12	-	-	-
Filaree	-	-	6	-	12
Fleabane, annual	6	20	-	-	-
Fleabane, hairy (<i>Conyza bonariensis</i>)	-	-	6	-	10
Fleabane, rough	3	6	12	-	-
Florida pusley	-	-	4	-	6
Foxtail, giant, bristly, yellow	6	12	20	-	-
Foxtail, Carolina	10	-	-	-	-
Foxtail, green	12	-	-	-	-
Goatgrass, jointed	6	12	-	-	-
Goosegrass	-	3	6	-	12
Grain sorghum (milo)	6	12	20	-	-
Groundcherry	-	3	6	-	9
Groundsel, common	-	6	10	-	-
Hemp sesbania	-	2	4	6	8

Henbit	-	-	6	-	12
Horseweed/ Maretail (<i>Conyza canadensis</i>)	-	6	12	-	18
Itchgrass	6	8	12	-	18
Jimsonweed	-	-	12	-	18
Johnsongrass, seedling	6	12	18	-	24
Junglerice	-	3	6	7	9
Knotweed	-	-	6	-	12
Kochia ⁴	-	3 to 6	12	-	-
Lambsquarters	-	6	12	-	20
Little barley	6	12	-	-	-
London rocket	6	-	24	-	-
Mayweed	-	2	6	12	18
Morningglory, annual (<i>Ipomoea spp</i>)	-	-	3	-	6
Mustard, blue	6	12	18	-	-
Mustard, tansy	6	12	18	-	-
Mustard, tumble	6	12	18	-	-
Mustard, wild	6	12	18	-	-
Nightshade, black	-	4	6	-	12
Nightshade, hairy	-	4	6	-	12
Oats	3	6	18	-	-
Pigweed species	-	12	18	24	-
Prickly lettuce	-	6	12	-	-
Purslane	-	-	3	-	6
Ragweed, common	-	6	12	-	18
Ragweed, giant	-	6	12	-	18
Red rice	-	-	4	-	-
Rye, volunteer/cereal ²	6	18	18 +	-	-

Ryegrass	-	-	6	-	12
Sandbur, field	6	12	-	-	-
Sandbur, longspine	6	12	-	-	-
Shattercane	6	12	20	-	-
Shepherd's-purse	6	12	-	-	-
Sicklepod	-	2	4	-	8
Signalgrass, broadleaf	-	3	6	7	9
Smartweed, ladysthumb	-	-	6	-	9
Smartweed, Pennsylvania	-	-	6	-	9
Sowthistle, annual	-	-	6	-	12
Spanishneedles	-	-	6	-	12
Speedwell, purslane	12	-	-	-	-
Sprangletop	6	12	20	-	-
Spurge, prostrate	-	6	12	-	-
Spurge, spotted	-	6	12	-	-
Spurry, umbrella	6	-	-	-	-
Stinkgrass	-	12	-	-	-
Sunflower	12	18	-	-	-
Swinecress	-	5	12	-	-
Teaweed/ Prickly sida	-	2	4	-	6
Texas panicum	6	8	12	-	24
Thistle, Russian ⁵	-	6	12	-	-
Velvetleaf	-	-	6	-	12
Virginia pepperweed	-	18	-	-	-
Waterhemp	-	-	6	-	12
Wheat ²	6	12	18	-	-
Wheat, (overwintered)	-	6	12	-	18

Wild oats	3	6	18	-	-
Wild proso millet	-	6	12	-	18
Witchgrass	-	12	-	-	-
Woolly cupgrass	-	6	12	-	-
Yellow rocket	-	12	20	-	-

¹ For control of downy brome in no-till systems, use 16 fluid ounces per acre.

² Performance is better if application is made before this weed reaches the boot stage of growth.

³ Use 16 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fluid ounces followed by 22 fluid ounces of this product per acre.

⁴ Do not treat kochia in the button stage.

⁵ Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

13.1 Annual Weeds -- Rates for 10 to 40 Gallons per Acre

Apply 22 to 44 fluid ounces of this product per acre. Use 22 fluid ounces per acre if weeds are less than 6 inches tall, 32 fluid ounces per acre if weeds are 6 to 12 inches tall and 44 fluid ounces per acre if weeds are greater than 12 inches tall. These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

13.2 Annual Weeds -- Tank Mixtures with 2,4-D, Dicamba or Tordon 22K

8 to 11 fluid ounces of this product plus 0.25 pound of dicamba or 0.5 pound of 2,4-D or 1 to 2 fluid ounces of Tordon™ 22K per acre will control the following weeds with the maximum height or length indicated: 6 inches -- prickly lettuce, maretail/horseweed, morning glory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12 inches -- cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

11 fluid ounces of this product plus 0.5 pound of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

13.3 Annual Weeds -- Hand-Held or High-Volume Equipment

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7 percent solution.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 4 percent solution for annual and perennial weeds and a 4 to 7 percent solution for woody brush and trees.

13.4 Annual Weeds -- Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

16 to 20 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fluid ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 0.125 pounds of dicamba for control).

14.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)

Apply to actively growing perennial weeds.

NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
Alfalfa	1 - 1.5	3 - 10	1.5%
Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.			
Alligatorweed	3	3 - 20	1%
For partial control, apply when most of the plants are in bloom. Repeat applications will be required to maintain control.			
Anise (fennel)	--	--	1 - 1.5%

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Bahiagrass	2 - 3.3	3 - 20	1.5%
-------------------	----------------	---------------	-------------

Apply when most plants have reached the early head stage.

Bentgrass	1	10 - 20	1.5%
------------------	----------	----------------	-------------

For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.

Bermudagrass	2 - 3.3	3 - 20	1.5%
---------------------	----------------	---------------	-------------

For control, apply 3.3 quarts of this product per acre. For partial control, apply 64 fluid ounces per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.

Bermudagrass, water (knotgrass)	0.7 - 1	5 - 10	1.5%
--	----------------	---------------	-------------

Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only: Apply 22 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermudagrass that is 12 to 18 inches in length.

This product is not registered in California for use on water Bermudagrass.

Bindweed, field	0.4 - 3.3	3 - 20	1.5%
------------------------	------------------	---------------	-------------

Do not treat field bindweed under drought stress as good soil moisture is necessary for active growth.

For control, apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Also for control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba in 10 to 20 gallons of water per acre. Do not apply by air.

For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product plus 1.0 pound of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

In California only, apply 22 fluid ounces to 3.3 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky	0.7 - 1.5	3 - 40	1.5%
----------------------------	------------------	---------------	-------------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Blueweed, Texas	2 - 3.3	3 - 40	1.5%
------------------------	----------------	---------------	-------------

Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Brackenfern	2 - 3	3 - 40	1%
--------------------	--------------	---------------	-----------

Apply to fully expanded fronds that are at least 18 inches long.

Bromegrass, smooth	0.7 - 1.5	3 - 40	1.5%
---------------------------	------------------	---------------	-------------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly-leaf	--	3 - 20	1.5%
-----------------------------	-----------	---------------	-------------

For control, apply 44 fluid ounces of this product plus 0.5 pound of dicamba per acre. For partial control, apply 22 fluid ounces of this product plus 0.5 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

Canarygrass, reed	1.5 - 2	3 - 40	1.5%
--------------------------	----------------	---------------	-------------

For best results, apply when most plants have reached the boot-to-head stage of growth.

Cattail	2 - 3.3	3 - 40	1.5%
----------------	----------------	---------------	-------------

Apply when most plants have reached the early head stage.

Clover; red or white	2 - 3.3	3 - 20	1.5%
-----------------------------	----------------	---------------	-------------

Apply when most plants have reached the early bud stage.

Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1.0 pound of 2,4-D in 3 to 10 gallons of water per acre.

Cogongrass	2 - 3.3	10 - 40	1.5%
-------------------	----------------	----------------	-------------

Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

Dallisgrass	2 - 3.3	3 - 20	1.5%
-------------	---------	--------	------

Apply when most plants have reached the early head stage.

Dandelion	2 - 3.3	3 - 40	1.5%
-----------	---------	--------	------

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dock, curly	2 - 3.3	3 - 40	1.5%
-------------	---------	--------	------

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 11 to 22 fluid ounces of this product plus 0.5 to 1.0 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dogbane, hemp	3	3 - 40	1.5%
---------------	---	--------	------

Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.

Fescue (except tall)	2 - 3.3	3 - 20	1.5%
----------------------	---------	--------	------

Apply when most plants have reached the early head stage.

Fescue, tall	0.7 - 2	3 - 40	1.5%
--------------	---------	--------	------

Apply 64 fluid ounces of this product per acre when most plants have reached boot-to-early seedhead stage of development.

Fall applications only: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 11 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.

Guineagrass	1.5 - 2	3 - 40	1%
-------------	---------	--------	----

Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and ridge of Florida, use 44 fluid ounces for control. In the flatwoods region of Florida, 64 fluid ounces is required for control.

Horsenettle	2 - 3.3	3 - 20	1.5%
-------------	---------	--------	------

334

Apply when most plants have reached the early bud stage.

Horseradish	3	3 - 40	1.5 %
--------------------	----------	---------------	--------------

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Iceplant	--	--	1.5 - 2%
-----------------	-----------	-----------	-----------------

Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.

Jerusalem artichoke	2 - 3.3	3 - 20	1.5 %
----------------------------	----------------	---------------	--------------

Apply when most plants are in the early bud stage.

Johnsongrass	0.4 - 2	3 - 40	1 %
---------------------	----------------	---------------	------------

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 22 fluid ounces of this product per acre.

For burndown of Johnsongrass, apply 11 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)--Apply a 0.7 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass	1.5 - 2	3 - 40	1.5%
--------------------	----------------	---------------	-------------

Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

Knapweed	3	3 - 40	1.5%
-----------------	----------	---------------	-------------

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana	--	--	1%
----------------	-----------	-----------	-----------

Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Lespedeza	2 - 3.3	3 - 20	1.5%
------------------	----------------	---------------	-------------

Apply when most plants have reached the early bud stage.

Milkweed, common	2	3 - 40	1.5%
------------------	---	--------	------

Apply when most plants have reached the late bud to flower stage of growth.

Muhly, wirestem	0.7 - 1.5	3 - 40	1.5%
-----------------	-----------	--------	------

Use 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or noncrop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

Mullein, common	2 - 3.3	3 - 20	1.5%
-----------------	---------	--------	------

Apply when most plants are in the early bud stage.

Napiergrass	2 - 3.3	3 - 20	1.5%
-------------	---------	--------	------

Apply when most plants are in the early head stage.

Nightshade, silverleaf	1.5	3 - 10	1.5%
------------------------	-----	--------	------

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge, purple or yellow	0.4 - 2	3 - 40	1 - 1.5%
-------------------------------	---------	--------	----------

Apply 64 fluid ounces of this product per acre or apply a 1 to 1.5 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 11 to 44 fluid ounces of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

Orchardgrass	0.7 - 1.5	3 - 40	1.5%
--------------	-----------	--------	------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Orchardgrass sods going to no-till corn: Apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

Pampasgrass	--	--	1 - 1.5%
--------------------	----	----	----------

Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass	2 - 3.3	3 - 20	1.5%
------------------	---------	--------	------

Apply when most plants are in the early head stage.

Phragmites	2 - 3.3	10 - 40	1 - 1.5%
-------------------	---------	---------	----------

For partial control, and best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock	--	--	1 - 1.5%
-----------------------	----	----	----------

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Thorough coverage is necessary for best control.

Pokeweed, common	1	3 - 40	1.5%
-------------------------	---	--------	------

Apply to actively growing plants up to 24 inches tall.

Quackgrass	0.7 - 2	3 - 40	1.5%
-------------------	---------	--------	------

In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

In pastures, sods or non-crop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

Redvine	0.5 - 1.5	5 - 10	1.5%
----------------	-----------	--------	------

For suppression, apply 16 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 44 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant	--	--	1.5%
--------------------	----	----	------

Best results are obtained when applications are made in late summer to fall.

Ryegrass, perennial	0.7 - 2	3 - 40	1%
----------------------------	---------	--------	----

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons

of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 1 quart of this product per acre.

Smartweed, swamp	2 - 3.3	3 - 40	1.5 %
------------------	---------	--------	-------

Apply when most plants have reached the early bud stage of growth. Also for control, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.

Sowthistle, perennial	1.5 - 2	3 - 40	1.5 %
-----------------------	---------	--------	-------

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

Spurge, leafy	--	3 - 10	1.5 %
---------------	----	--------	-------

For suppression, apply 11 fluid ounces of this product plus 0.5 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Starthistle, yellow	1.5	10 - 40	1.5 %
---------------------	-----	---------	-------

Best results are obtained when applications are made during the rosette, bolting and early flower stages.

Sweet potato, wild	--	--	1.5 %
--------------------	----	----	-------

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke	--	--	1.5 %
--------------------	----	----	-------

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, Canada	1.5 - 2	3 - 40	1.5 %
-----------------	---------	--------	-------

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression in the spring, apply 22 fluid ounces of this product, or 11 fluid ounces of this product plus 0.5 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

Timothy	1.5 - 2	3 - 40	1.5 %
---------	---------	--------	-------

For best results, apply when most plants have reached the boot-to-head stage of growth.

Torpedograss	2.5 - 3.3	3 - 40	1.5 %
--------------	-----------	--------	-------

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Trumpet creeper	1.5	5 - 10	1.5 %
-----------------	-----	--------	-------

For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Vaseygrass	2 - 3.3	3 - 20	1.5 %
------------	---------	--------	-------

Apply when most plants are in the early head stage.

Velvetgrass	2 - 3.3	3 - 20	1.5 %
-------------	---------	--------	-------

Apply when most plants are in the early head stage.

Wheatgrass, western	1.5 - 2	3 - 40	1.5 %
---------------------	---------	--------	-------

For best results, apply when most plants have reached the boot-to-head stage of growth.

15.0 WOODY BRUSH AND TREES RATE TABLE (Alphabetically by Species)

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3 - 40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Rate (QT/A)	Hand-Held % Solution	Comments
--------------	----------------	-------------------------	----------

PC = Partial Control; C = Control

Alder	2 - 3	1 %	C
Ash	1.5 - 3.3	1 - 1.5 %	PC
Aspen, quaking	1.5 - 2	1 %	C

Bearmat (Bearclover)	1.5 - 3.3	1 - 1.5%	PC
Beech	1.5 - 3.3	1 - 1.5%	PC
Birch	1.5 - 2	1%	C
Blackberry	2 - 3	1%	C

Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7 percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 to 2.5 quarts of this product in 10 to 40 gallons of water per acre.

Blackgum	1.5 - 3.3	1 - 1.5%	C
Bracken	1.5 - 3.3	1 - 1.5%	C
Broom; French, Scotch	--	1 - 1.5%	C
Buckwheat, California	--	1 - 1.5%	PC

Thorough coverage of foliage is necessary for best results.

Cascara	1.5 - 3.3	1 - 1.5%	PC
Catsclaw	--	1%	PC
Ceanothus	1.5 - 3.3	1 - 1.5%	PC
Chamise	--	1%	C

Thorough coverage of foliage is necessary for best results.

Cherry; bitter, black, pin	1.5 - 2	1%	C
Coyote brush	--	1 - 1.5%	C

Apply when at least 50 percent of the new leaves are fully developed.

Dogwood	1.5 - 3.3	1 - 1.5%	PC
Elderberry	1.5 - 2	1%	C
Elm	1.5 - 3.3	1 - 1.5%	PC
Eucalyptus	--	1.5%	C

For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed eucalyptus plants.

Florida holly (Brazilian Peppertree)	1.5 - 3.3	1 - 1.5%	PC
Gorse	1.5 - 3.3	1 - 1.5%	PC
Hasardia	--	1 - 1.5%	PC.

Thorough coverage of foliage is necessary for best results.

Hawthorn	1.5 - 2	1%	C
Hazel	1.5 - 2	1%	C
Hickory	1.5 - 3.3	1 - 1.5%	PC
Honeysuckle	2 - 3	1%	C
Hornbeam, American	1.5 - 3.3	1 - 1.5%	PC
Kudzu	2.5 - 3.3	1.5%	C

Repeat applications may be required to maintain control.

Locust, black	1.5 - 3	1 - 1.5%	PC
Madrone resprouts	--	1.5%	PC.

Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Manzanita	1.5 - 3.3	1 - 1.5%	PC
Maple, red	1.5 - 3	1%	C

Apply a 1 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.

Maple, sugar	--	1%	C
--------------	----	----	---

Apply when at least 50 percent of the new leaves are fully developed.

Monkey flower	--	1 - 1.5%	PC
---------------	----	----------	----

Thorough coverage of foliage is necessary for best results.

Oak; black, white	1.5 - 3	1 - 1.5%	PC
Oak, post	2 - 3	1%	C

Oak; northern,	--	1%	C
----------------	----	----	---

Apply when at least 50 percent of the new pin leaves are fully developed

Oak; southern red	1.5 - 2	1%	C
Persimmon	1.5 - 3.3	1 - 1.5%	PC
Pine	1.5 - 3.3	1 - 1.5%	C
Poison ivy/ Poison oak	2.5 - 3.3	1.5%	C

Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

Poplar, yellow	1.5 - 3.3	1 - 1.5%	PC
Redbud, eastern	1.5 - 3.3	1 - 1.5%	C
Rose, multiflora	1.5	1%	C

Treatments should be made prior to leaf deterioration by leaf-eating insects.

Russian olive	1.5 - 3.3	1 - 1.5%	PC
Sage, black	--	1%	C

Thorough coverage of foliage is necessary for best results.

Sage, white	1.5 - 3.3	1 - 1.5%	PC
Sage brush, California	--	1%	C

Thorough coverage of foliage is necessary for best results.

Salmonberry	1.5 - 2	1%	C
Salt-cedar	1.5 - 3.3	1 - 1.5%	C
Sassafras	1.5 - 3.3	1 - 1.5%	PC
Sourwood	1.5 - 3.3	1 - 1.5%	PC
Sumac; poison, smooth, winged	1.5 - 3	1 - 1.5%	PC
Sweetgum	1.5 - 2	1%	C
Swordfern	1.5 - 3.3	1 - 1.5%	PC

Tallowtree, Chinese	--	1%	C
---------------------	----	----	---

Thorough coverage of foliage is necessary for best results

Tan oak resprouts	--	1.5%	PC
-------------------	----	------	----

Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.

Thimbleberry	1.5 - 2	1%	C
--------------	---------	----	---

Tobacco, tree	--	1 - 1.5%	PC
---------------	----	----------	----

Trumpet creeper	1.5 - 2	1%	C
-----------------	---------	----	---

Vine maple	1.5 - 3.3	1 - 1.5%	PC
------------	-----------	----------	----

Virginia creeper	1.5 - 3.3	1 - 1.5%	C
------------------	-----------	----------	---

Waxmyrtle, southern	1.5 - 3.3	1 - 1.5%	PC
------------------------	-----------	----------	----

Willow	2 - 3	1%	C
--------	-------	----	---

16.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims, whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions - beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Amplify, Bullet, Degrec, Degree Xtra, Farmsource, Harness, Lariat, Lasso, Micro-Tech, Monsanto and Vine symbol, Permit Roundup Original and Roundup UltraMAX, are trademarks of Monsanto Technology LLC.

Assure, Authority, Canopy, Escort, Krovar, Leadoff, Lexone, Oust and Telar are trademarks of E.I. duPont de Nemours & Co. Inc.

Direx, Karmex, Linex and Lorox are trademarks of Griffin LLC.

Barricade, Bicep MAGNUM, Boundary, Dual MAGNUM, Endurance, Flexstar, Fusion, Princep Caliber, Reflex, Solicam and Vanquish are trademarks of Syngenta Crop Protection Inc.

Firstrate, Fultime, Python, Surflan, Topnotch and Tordon are trademarks of Dow AgroSciences LLC.

Banvel, Clarity, Distinct, Frontier, Guardsman, Marksman, Outlook, Prowl, Pursuit, Scepter, Squadron and Steel are trademarks of BASF Corp.

Balance, Folex, Ginstar, and Prep are trademarks of Aventis CropSciences.

Goal is a trademark of Rohm and Haas Company.

Axiom, DEF, Domain, Epic and Sencor are trademarks of Bayer Crop Protection.

Aim, Command and Gauntlet are trademarks of FMC Corporation.

Devrinol is a trademark of United Phosphorus Inc.

Sim-Trol is a trademark of Sipcam Agro USA, Inc.

Valor is a trademark of Valent USA Corporation

This product is protected by U.S. Patent Nos. 5,688,085 and 6,365,551. Other patents pending. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-537

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

© 2002 MONSANTO COMPANY
ST. LOUIS, MISSOURI, 63167 USA

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

April 26, 2002

Document Processing Center (NOTIF)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

**Subject: Roundup WeatherMAX Herbicide (EPA Reg. No. 524-537)
Notification of Alternate Brand Name**

Dear Mr. Tompkins:

At this time Monsanto is Notifying the Agency that we will market product registered under EPA Reg. No. 524-537 using a new alternate brand name "Roundup WeatherMAX Herbicide". The labeling will be based on the Master Label for this registration number that was approved 11-Apr-2002. Draft labeling for this product is enclosed. Final Printed Labeling for this brand name will be submitted with any necessary explanation for minor changes from the approved labeling text as soon as it is available and prior to product shipment.

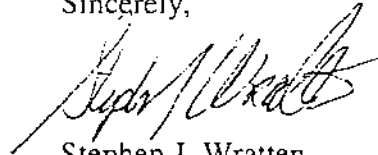
This notification of alternate brand name is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR§ 152.46, and no other changes) have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec. 1001 to willfully make any false statements to the EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and I may be subject to enforcement actions and penalties under sections 12 and 14 of FIFRA.

345

Mr. Tompkins Page 2
26-Apr-02

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

Roundup WeatherMAX name.doc

346

MASTER LABEL FOR EPA REG. NO. 524-LGT

Registered Brand Names:

MON 78270 Herbicide
MON 007 Herbicide

Table of Contents for Master Label

I.	Main Label for Food Crop Uses	2 of 120
II.	Supplemental Labeling for Food Crop Uses	70 of 120
III.	Main Label for Industrial, Turf, & Ornamental Uses	84 of 120
IV.	Supplemental Labeling for Industrial, Turf, & Ornamental Uses	115 of 120

****See each label part for more detailed table of contents****

I. MAIN LABEL FOR FOOD CROP USES

[INSERT BRAND NAME]

Herbicide

Complete Directions for Use

EPA Reg. No. 524-LGT

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY® CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Herbicide for Roundup Ready® Crops.

Selective broad-spectrum weed control in Roundup Ready crops. Non-selective, broad-spectrum weed control for many cropping systems, farmsteads and Conservation Reserve Program acres.

Transorb™

A member of the Roundup Family of Herbicides by Monsanto

"The President's Green Chemistry Award was presented in 1996 to Monsanto for its innovative "zero-waste" process in the manufacture of Roundup Herbicide."

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Container Label Statement (5 gallons or smaller):

This container is not to be sold to homeowners for residential use.

Read the entire label before using this product.

Use only according to label instructions.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

Refillable Container Label Statement:

346

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.

Non-refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING.

Roundup W Herbicide Container Label Statement:
FOR REPACKAGING INTO HERBICIDES ONLY.

CONTENTS

- 1 1.0 INGREDIENTS
- 2 2.0 IMPORTANT PHONE NUMBERS
- 3 3.0 PRECAUTIONARY STATEMENTS
 - 3.1 Hazards to Humans and Domestic Animals
 - 3.2 Environmental Hazards
 - 3.3 Physical or Chemical Hazards
- 4 4.0 STORAGE AND DISPOSAL
- 5 5.0 GENERAL INFORMATION
(How This Product Works)
- 6 6.0 MIXING
 - 6.1 Mixing with Water
 - 6.2 Tank Mixing Procedure
 - 6.3 Mixing for Hand-Held Sprayers
 - 6.4 Ammonium Sulfate
 - 6.5 Colorants or Dyes
 - 6.6 Drift Control Additives
- 7 7.0 APPLICATION EQUIPMENT AND TECHNIQUES
 - 7.1 Aerial Equipment
 - 7.2 Ground Broadcast Equipment
 - 7.3 Hand-Held or High-Volume Equipment
 - 7.4 Selective Equipment
 - 7.5 Injection Systems
 - 7.6 CDA Equipment
- 8 8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)
 - 8.1 Cereal and Grain Crops
 - 8.2 Corn
 - 8.3 Cotton
 - 8.4 Fallow Systems
 - 8.5 Grain Sorghum (Milo)
 - 8.6 Herbs and Spices
 - 8.7 Oil Seed Crops

Handwritten signature

I. MAIN LABEL FOR FOOD CROP USES

- 8.8 Soybeans
- 8.9 Sugarcane
- 8.10 Vegetable Crops
- 8.11 Miscellaneous Crops
- 9 9.0 **TREE, VINE, AND SHRUB CROPS (Alphabetical)**
 - 9.1 Berry Crops
 - 9.2 Citrus
 - 9.3 Miscellaneous Tree Food Crops
 - 9.4 Non-Food Tree Crops
 - 9.5 Pome Fruit
 - 9.6 Stone Fruit
 - 9.7 Tree Nuts
 - 9.8 Tropical and Subtropical Trees and Fruits
 - 9.9 Vine Crops
- 10 10.0 **PASTURE GRASSES, FORAGE LEGUMES, AND RANGELANDS**
 - 10.1 Alfalfa, Clover, and Other Forage Legumes
 - 10.2 Conservation Reserve program (CRP)
 - 10.3 Grass Seed Production
 - 10.4 Pastures
 - 10.5 Rangelands
 - 10.6 Turf Grass Sod Production
- 11 11.0 **ROUNDUP READY CROPS**
 - 11.1 Canola with the Roundup Ready Gene
 - 11.2 Corn with the Roundup Ready Gene
 - 11.3 Cotton with the Roundup Ready Gene
 - 11.4 Soybeans with the Roundup Ready Gene
 - 11.5 Sugar beets with the Roundup Ready Gene
- 12 12.0 **NON-CROP USES AROUND THE FARMSTEAD**
 - 12.1 General Weed Control and Trim-And-Edge
 - 12.2 Greenhouse/Shadehouse
 - 12.3 Chemical Mowing
 - 12.4 Cut Stumps
 - 12.5 Habitat Management
- 13 13.0 **ANNUAL WEEDS RATE TABLE**
(Alphabetically by Species)
 - 13.1 Annual Weeds -- Rates for 10 to 40 GPA
 - 13.2 Annual Weeds -- Tank Mixtures with 2,4-D, Dicamba, or Tordon 22K
 - 13.3 Annual Weeds -- Hand-Held or High-Volume Equipment
 - 13.4 Annual Weeds - Tank Mixtures with Atrazine
for Fallow and Reduced Tillage Systems
- 14 14.0 **PERENNIAL WEEDS RATE TABLE**
(Alphabetically by Species)
- 15 15.0 **WOODY BRUSH AND TREES RATE TABLE**
(Alphabetically by Species)
- 16 16.0 **LIMIT OF WARRANTY AND LIABILITY**

348



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg.
Number:

524-537

Date of Issuance:

APR 11 2002

Term of Issuance:

Conditional

Name of Pesticide Product:

MON 78270 Herbicide

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Monsanto Company
600 13th Street, N.W. Suite 660
Washington, DC 20005

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit the storage stability and corrosion characteristics study once it is completed.
2. Submit/cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
3. Add the phrase "EPA Registration No. 524-537" before you release the product for shipment.
4. Submit three (3) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of this product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records. vkw

Signature of Approving Official:

Date:

4-11-02

347

latest
Label

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt 48.8%

OTHER INGREDIENTS: 51.2%
100.0%

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT,
CALL TOLL-FREE,

1-800-332-3111

2. IN CASE OF AN EMERGENCY INVOLVING THIS HERBICIDE PRODUCT, OR FOR MEDICAL
ASSISTANCE, CALL COLLECT, DAY OR NIGHT,

(314)-694-4000

3.0 PRECAUTIONARY STATEMENTS

3.1 Hazards to Humans and Domestic Animals

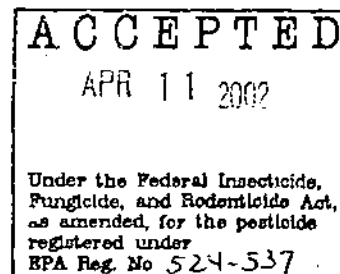
Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.



FIRST AID: Call a poison control center or doctor for treatment advice.

IF IN EYES	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.
IF ON SKIN	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 - 20 minutes.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.

358

I. MAIN LABEL FOR CROP USES

- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as [INSERT BRAND NAME], EPA Registration No. 524-LGT. You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater, composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY

I. MAIN LABEL FOR FOOD CROP USES

TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks and chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

1. MAIN LABEL FOR FOOD CROP USES

See container label for STORAGE AND DISPOSAL instructions.

Container Label Statements:

(FOR REFILLABLE PORTABLE CONTAINERS)

Do not reuse this container except for refill in accordance with a valid Monsanto Repackaging or Toll Repackaging Agreement. If not refilled or returned to the authorized repackaging facility, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(FOR BULK CONTAINERS)

Triple rinse emptied bulk container. Then offer for recycling or reconditioning, or dispose of in a manner approved by state and local authorities.

(FOR PLASTIC 1-WAY CONTAINERS & BOTTLES)

Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(FOR DRUMS)

Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

5.0 GENERAL INFORMATION

(How This Product Works)

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Do not add surfactants, additives containing surfactants, buffering agents or pH adjusting agents to the spray solution when [INSERT BRAND NAME] is the only pesticide used unless otherwise directed. Ammonium sulfate, drift control additives, or dyes and colorants may be used. See the "MIXING" section of this label for instructions.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Stage of Weeds: Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" for recommendations for specific weeds.

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

553

I. MAIN LABEL FOR FOOD CROP USES

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

Spray Coverage: For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Mode of Action: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the herbicide and will continue to grow.

Biological Degradation: Degradation of this product is primarily a biological process carried out by soil microbes.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials may result in reduced performance.

Annual Maximum Use Rate: Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5.3 quarts of this product per acre per year. For applications in non-crop sites or in tree, vine, or shrub crops, the combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

6.0 MIXING

Use the following conversion table to help determine application rates of [INSERT BRAND NAME] based on commonly used rates of Roundup Original and Roundup UltraMAX.

NOW EVEN MORE CONCENTRATED [INSERT BRAND NAME] CONVERSION TABLE

I. MAIN LABEL FOR FOOD CROP USES

[INSERT BRAND NAME] (Ounces)	Roundup UltraMAX (Ounces)	Roundup Original (Ounces)
16	20	24
22	26	32
28	32	40
32	40	48

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20- to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If ammonium sulfate is used add it slowly through the screen into the tank. Continue agitation. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding other products.
4. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
5. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
6. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
7. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive and water soluble liquid.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

I. MAIN LABEL FOR FOOD CROP USES

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "TANK MIXING" section of "GENERAL INFORMATION" for additional precautions.

6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Desired Volume	Amount of [INSERT BRAND NAME]					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	1/2 oz	1 oz	1-1/3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.8 qt	1 qt	1-1/2 qt	4 qt	7 qt
100 gal	1.6 qt	3.2 qt	1 gal	1-1/2 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product, particularly under hard water conditions, drought conditions or when tank mixed with certain residual herbicides, on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that dry ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: When using ammonium sulfate, apply this product at rates recommended in this label. Lower rates will result in reduced performance.

6.5 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's recommendations.

6.6 Drift Control Additives

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and Controlled Droplet Applicator (CDA) equipment. When a drift control additive is used, read and carefully

I. MAIN LABEL FOR FOOD CROP USES

observe the cautionary statements and all other information appearing on the additive label. The use of drift control additives can affect spray coverage which may result in reduced performance.

7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial--Fixed Wing and Helicopter

Ground Broadcast Spray--Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-Held or High-Volume Spray Equipment--Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment--Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems--Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA)--Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the recommended rates of this herbicide in 3 to 15 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 22 fluid ounces per acre. Refer to the individual use area sections of this label for recommended volumes, application rates, and further instructions.

FOR AERIAL APPLICATION IN CALIFORNIA OR SPECIFIC COUNTIES THEREIN, OR IN ARKANSAS, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE OR COUNTY FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

This product plus dicamba tank mixtures may not be applied by air in California.

Ensure uniform application - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. MAIN LABEL FOR FOOD CROP USES

1. The distance of the outermost nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the **Wind, Temperature and Humidity**, and **Temperature Inversions** sections of this label).

Controlling droplet size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.
- **Boom Length:** For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive areas

The product should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

Avoid direct application to any body of water.

Aircraft Maintenance

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

7.2 Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat spray nozzles. Check for even distribution of spray droplets.

7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For recommended rates and timing, refer to the "ANNUAL WEEDS -- HAND-HELD OR HIGH-VOLUME EQUIPMENT" section of this product label.

7.4 Selective Equipment

I. MAIN LABEL FOR FOOD CROP USES

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on this label.

In cropping systems, hooded sprayers, shielded sprayers, and wipers may be used in row middles (in between rows of crop plants) where any dripping or leaking will not contact crop foliage. Such equipment must be capable of preventing all crop contact with herbicide solutions and operated without leakage of spray mists or dripping onto crop. Wipers over-the-top of crops may be used only when specifically recommended in this product's labeling.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications made above the crops should be made when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Recirculating spray system

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

Shielded and hooded applicators

When applied under the conditions described in the following paragraphs for shielded and hooded applications, this product at recommended rates will control those weeds listed in the "ANNUAL WEEDS RATE TABLE" and "PERENNIAL WEEDS RATE TABLE" sections of this label. A hooded sprayer is a type of shielded applicator where the spray pattern is fully enclosed including top, sides, front and back, thereby shielding the crop from the spray solution. Keep shields on these sprayers adjusted to protect desirable vegetation. When applying to crops grown on raised beds, ensure that the hood is designed to completely enclose the spray solution. If necessary, extend the front and rear flaps of the hoods to reach the ground in deep furrows. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

Use hoods designed to minimize excessive dripping or run-off down the insides of the hoods. A single, low pressure/low drift flat-fan nozzle with an 80 to 95 degree spray angle positioned at the top center of the hood is recommended. Spray volume should be 20-30 gallons per acre.

These procedures will reduce the potential for crop injury:

- The spray hoods must be operated on the ground or skimming across the ground.

360

1. MAIN LABEL FOR FOOD CROP USES

- Leave at least an 8 inch untreated strip over the drill row. For example, if the crop row width is 38 inches, the maximum width of the spray hood should be 30 inches.
- Maximum tractor speed: 5 mph to avoid bouncing of the spray hoods.
- Maximum wind speed: 10 mph.
- Use low-drift nozzles that provide uniform coverage within the treated area.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

Wiper applicators

When applied under the conditions described in the following paragraphs, this product **CONTROLS** many weeds, including volunteer corn, Texas panicum, common rye, shattercane, sicklepod, spanishneedles and bristly starbur; and **SUPPRESSES** many weeds including Florida beggarweed, bermudagrass, hemp dogbane, dogfennel, guineagrass, johnsongrass, milkweed, silverleaf nightshade, redroot-pigweed, giant ragweed, smutgrass, sunflower, Canada thistle, musk thistle, vaseygrass, velvetleaf.

Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Do not add surfactant to the herbicide solution.

For Rope or Sponge Wick Applicators-- Solutions ranging from 33 to 75 percent of this product in water may be used. Apply this solution to weeds listed in this section.

For Panel Applicators-- Solutions ranging from 33 to 100 percent of this product in water may be used in panel wiper applicators.

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the concentrate of other products when using injection systems.

7.6 CDA Equipment

I. MAIN LABEL FOR FOOD CROP USES

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 1.5 mph (1 quart per acre). For the control of perennial weeds, apply a 20 to 30 percent solution of this product at a flow rate of 2 fluid ounces per minute and a walking speed of 0.75 mph (2 to 3 quarts per acre).

Controlled droplet application equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

8.0 ANNUAL AND PERENNIAL CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED CROPS WITHIN SECTION 8 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, AND ADDITIONAL PRECAUTIONS AND RESTRICTIONS.

See the "ROUNDUP READY CROPS" section of this label or separately published Monsanto Supplemental Labeling for instructions for treating Roundup Ready crops.

TYPES OF APPLICATIONS:

Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, At-Planting, Hooded Sprayers in row-middles, Shielded Sprayers in row-middles, Wiper Applicators in row-middles, and Post-Harvest treatments.

GENERAL USE INSTRUCTIONS:

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at-planting, or preemergent to annual and perennial crops listed in this label, except where specifically limited. For any crop not listed in this label, applications must be made at least 30 days prior to planting. Unless otherwise specified, weed control applications may be made according to the rates listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" in this label. Repeat applications may be made up to a maximum of 5.3 quarts per acre per year.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or unmulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at-planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers

22

I. MAIN LABEL FOR FOOD CROP USES

must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

For broadcast postemergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

8.1 Cereal and Grain Crops

LABELED CROPS: Barley, Buckwheat, Millet (pearl, proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (all types), Wild rice.

PRECAUTIONS, RESTRICTIONS: Do not treat rice fields or levees when field contains water.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Red Rice Control Prior to Planting Rice, Spot Treatment (except Rice), Wiper Applications Over-the-Top (Feed Barley and Wheat only), preharvest (Feed Barley and Wheat only).

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.

Red Rice Control Prior to Planting Rice

USE INSTRUCTIONS: Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may be only partially controlled.

PRECAUTIONS, RESTRICTIONS: Avoid spraying during low humidity conditions, as reduced control may result. Do not treat rice fields or levees when the fields contain floodwater. Do not re-flood treated fields for 8 days following application.

Spot Treatment (except Rice)

USE INSTRUCTIONS: This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Wiper Applications Over-the-Top (Feed Barley and Wheat Only)

USE INSTRUCTIONS: Wiper applications may be used in wheat and feed barley. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, and when the rye is at least 6 inches above the wheat crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 35 days between application and harvest. Do not use roller applicators.

I. MAIN LABEL FOR FOOD CROP USES

Preharvest (Feed Barley and Wheat Only)

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of wheat or feed barley. For wheat, apply after the hard-dough stage of grain (30 percent or less grain moisture). For feed barley, apply after the hard-dough stage and when the grain contains 20 percent moisture or less. Stubble may be grazed immediately after harvest.

This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 10 gallons of water per acre.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 22 fluid ounces of this product per acre. Allow 7 days between application and harvest or grazing. Preharvest application is not recommended for wheat or barley grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop. Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.2 Corn

TYPES OF CORN: Field corn, Seed corn, Silage corn, Sweet corn and Popcorn.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest.

For Roundup Ready corn, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

2,4-D	DISTINCT™	LARIAT®
ATRAZINE	DUAL MAGNUM™	LASSO®/ALACHLOR
AXIOM™	DUAL II MAGNUM™	LINEX™/LOROX™
BALANCE™	EPIC™	MARKSMAN™
BANVEL™/CLARITY™	FRONTIER™/OUTLOOK™	MICRO-TECH®
BICEP MAGNUM™	FULTIME™	PROWL™
BICEP II MAGNUM™	GUARDSMAN™/LEADOFF™	PYTHON™
BULLET®	HARNESS®	SIMAZINE
DEGREE®	HARNESS XTRA	TOPNOTCH™
DEGREE XTRA®	HARNESS XTRA 5.6L	

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid

I. MAIN LABEL FOR FOOD CROP USES

ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased for acceptable weed control.

PRECAUTIONS, RESTRICTIONS: Applications of 2,4-D or dicamba must be made at least 7 days prior to planting corn.

For Southern states, do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds. The area covered by this recommendation includes from Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

PRECAUTIONS, RESTRICTIONS: Corn must be at least 12 inches tall, measured without extending leaves. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not apply more than 22 fluid ounces of this product per acre for each application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to silking of corn.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed). For ground applications, apply up to 64 fluid ounces of this product per acre. For aerial applications, apply up to 44 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest. Preharvest application is not recommended for corn grown for seed, as a reduction in germination or vigor may occur.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.3 Cotton

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Selective Equipment, Spot Treatment, Preharvest.

For Roundup Ready cotton, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence, and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton. Applications must be made prior to emergence of the crop.

Hooded Sprayer, Selective Equipment

USE INSTRUCTIONS: This product may be applied through hooded sprayers, recirculating sprayers, shielded applicators or wiper applicators in cotton. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to boll opening of cotton.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS" and "WOODY BRUSH AND TREES RATE TABLES" sections of this label. For cotton regrowth inhibition, apply 12 to 44 fluid ounces of this product per acre.

Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.

TANK MIXTURES: This product may be tank mixed with DEFTM 6, FolexTM, Ginstar, or PrepTM to provide additional enhancement of cotton leaf drop.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Preharvest application is not recommended for cotton grown for seed, as a reduction in germination or vigor may occur.

8.4 Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Aid-to-Tillage.

1. MAIN LABEL FOR FOOD CROP USES

Chemical Fallow

USE INSTRUCTIONS: This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label. This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. Applications up to 44 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.

PRECAUTIONS, RESTRICTIONS: For any crop not listed on this label, applications must be made at least 30 days prior to planting. Do not apply dicamba tank mixtures by air in California.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba is applied within 45 days of planting.

Preplant Fallow Beds

USE INSTRUCTIONS: This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. For any crop not listed on this label, applications must be made at least 30 days prior to planting. This product will control weeds listed in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES" sections of this label.

TANK MIXTURES: In addition, 8 fluid ounces of this product plus 2 to 3 fluid ounces of Goal™ 2XL per acre will control the following weeds with the maximum height or length indicated: 3 inches -- common cheeseweed, chickweed, groundsel; 6 inches -- London rocket, shepherd's-purse.

12 fluid ounces of this product plus 2 to 3 fluid ounces of Goal 2XL per acre will control the following weeds with the maximum height or length indicated: 6 inches -- common cheeseweed, groundsel, marehail (*Conyza canadensis*), 12 inches -- chickweed, London rocket, shepherd's-purse.

Aid-to-Tillage

USE INSTRUCTIONS: This product may be used in conjunction with tillage practices in fallow systems or preplant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 8 fluid ounces of this product in 3 to 10 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs. Allow at least 1 day after application before tillage.

PRECAUTIONS, RESTRICTIONS: Tank mixtures with residual herbicides may result in reduced performance.

8.5 Grain Sorghum (Milo)

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Over-the-Top Wiper Applications, Preharvest.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied alone or in tank-mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water or 10 to 60 gallons of nitrogen solution per acre.

I. MAIN LABEL FOR FOOD CROP USES

ATRAZINE	LARIAT
BICEP II MAGNUM	LIASSO
BULLET	MICRO-TECH
DUAL II MAGNUM	

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the use rate may need to be increased for acceptable weed control.

Spot Treatment and Over-the-Top Wiper Applications

USE INSTRUCTIONS: This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "Wiper Applicators" in the "SELECTIVE EQUIPMENT" section of this label.

PRECAUTIONS, RESTRICTIONS: For spot treatment, do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

For wiper applicators, allow at least 40 days between application and harvest. Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label.

Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.

PRECAUTIONS, RESTRICTIONS: Milo must be at least 12 inches tall, measured without extending leaves. Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator. Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers. Do not apply more than 22 fluid ounces of this product per acre per application and no more than 64 fluid ounces per acre per year for hooded sprayer applications.

Preharvest

USE INSTRUCTIONS: Make applications at 30 percent grain moisture or less.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre. As with other herbicides that cause sudden plant death, avoid preharvest applications of this product to milo infected with charcoal rot as lodging can occur. Allow a minimum of 7 days between application and harvest of sorghum. Preharvest application is not recommended for sorghum grown for seed, as a reduction in germination or vigor may occur. The use of this product for preharvest grain sorghum (milo) is not registered in California.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of grain sorghum. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 22 fluid ounces of this product per acre for control, or 16 fluid ounces of this product per acre for suppression.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

8.6 Herbs and Spices

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Camomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Culantro (seed), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Mioga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Over-the-Top Wiper Applications (Peppermint and Spearmint only), Spot Treatments (Peppermint and Spearmint only)

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system.

Over-the-top Wiper Applications or Spot Treatments (Peppermint and Spearmint only)

USE INSTRUCTIONS: This product may be used as a spot treatment or wiper application in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack and knapsack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area. In wiper applications, the applicator should be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.

PRECAUTIONS, RESTRICTIONS: Allow at least 7 days between application and harvest. Further applications may be made in the same area at 30-day intervals. In spot treatment applications, no more than 10 percent of the total field area to be harvested should be treated at one time. The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for this reason. In wiper applications, contact of the herbicide solution with the crop may result in damage or destruction.

8.7 Oil Seed Crops

36

I. MAIN LABEL FOR FOOD CROP USES

LABELED CROPS: Borage, Buffalo gourd (seed), Canola, Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

For Roundup Ready canola, see the "ROUNDUP READY CROPS" section of this label.

TYPES OF APPLICATIONS: Those listed in Section 8.0.

USE INSTRUCTIONS: This product may be applied before, during or after planting oil seed crops. Broadcast applications must be made prior to emergence of the listed oil seed crops. Wiper applicators or hooded sprayers may be used between the rows once the crop is established.

TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied before, during or after planting in conventional tillage systems, into a cover crop, established sod or in previous crop residue.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre on canola. Do not apply more than 22 fluid ounces of this product per acre for sunflowers as a single preplant or preemergent application per year. Do not feed or graze sunflower forage following application of this product.

8.8 Soybeans

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: Spot Treatment, Preharvest, Selective Equipment.

For Roundup Ready soybeans, see the "ROUNDUP READY CROPS" section of this label.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting soybeans. Applications must be made prior to emergence of the crop.

TANK MIXTURES: Apply these tank mixtures in 10 to 20 gallons of water per acre.

AIM™	DUAL II MAGNUM	MICRO-TECH
AMPLIFY™	FIRSTRATE™	PROWL
ASSURE II™	FLEXSTAR™	PURSUIT™
AUTHORITY™	FRONTIER™/OUTLOOK™	PURSUIT PLUS
BOUNDARY™	FUSION™	REFLEX™
CANOPY™	GAUNTLET™	SCEPTER™
CANOPY XL™	LESSO	SENCOR™/LEXONE™
COMMAND™	LINEX™	SQUADRON™
COMMAND XTRA™	LOROX/LINURON	STEEL™
DOMAIN™	LOROX PLUS™	VALOR™
DUAL MAGNUM		

This product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.

For difficult-to-control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 22 fluid ounces per acre in these tank mixtures. For other labeled annual weeds, apply 16 to 22 fluid ounces of this product per acre when weeds are less than 6 inches tall, and 22 to 32 fluid ounces when weeds are over 6 inches tall.

PRECAUTIONS, RESTRICTIONS: Tank-mixtures with some of the above listed herbicides may result in reduced weed control due to antagonism. Read and carefully observe the cautionary statements and all other

372

I. MAIN LABEL FOR FOOD CROP USES

information appearing on the product labels, supplemental labeling or fact sheets published separately for all herbicides used. Use according to the most restrictive directions for each product in the mixture.

Spot Treatment

USE INSTRUCTIONS: For spot treatments, apply this product prior to initial pod set in soybeans.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside target area for the same reason.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans.

Apply at rates given in the "ANNUAL WEEDS", "PERENNIAL WEEDS", and "WOODY BRUSH AND TREES RATE TABLES". This product may be applied using either aerial or ground spray equipment. Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 3.3 quarts per acre of this product for preharvest applications. Do not apply more than 44 fluid ounces per acre of this product by air. Allow a minimum of 7 days between application and harvest of soybeans. Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last preharvest application. (If the application rate is 22 fluid ounces per acre or lower, the grazing restriction is reduced to 14 days after last preharvest application.) Preharvest application is not recommended for soybeans grown for seed, as a reduction in germination or vigor may occur.

Selective Equipment

USE INSTRUCTIONS: This product may be applied through recirculating sprayers, shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans. Allow at least 7 days between application and harvest.

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

8.9 Sugarcane

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus Spot Treatment.

Preplant, Preemergence, At-Planting

USE INSTRUCTIONS: This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.

PRECAUTIONS, RESTRICTIONS: Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Spot Treatment

USE INSTRUCTIONS: This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray-to-wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.

PRECAUTIONS, RESTRICTIONS: Avoid spray contact with healthy cane plants since severe damage or destruction may result. Do not feed or graze treated sugarcane foliage following application.

Fallow Treatments

USE INSTRUCTIONS: This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 2.5 to 3.3 quarts of this product in 10 to 40 gallons of water per acre to new growth having at least 7 new leaves. Allow 7 or more days after application before tillage. Ground or aerial application equipment may be used. Applications up to 64 fluid ounces per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used.

Hooded Sprayers

USE INSTRUCTIONS: This product may be used through hooded sprayers for weed control between the rows of sugarcane. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional use instructions.

PRECAUTIONS, RESTRICTIONS: Do not allow treated weeds to come into contact with the crop. Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction. Such damage shall be the sole responsibility of the applicator.

8.10 Vegetable Crops

NOTE: THIS "VEGETABLE CROPS" SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED VEGETABLE CROPS WITHIN SECTION 8.10 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in row-middles, Shielded Sprayers in row-middles, Wiper Applications in row-middles, and Post-Harvest, Directed Applications (nonbearing ginseng), Over-the-Top Wipers (rutabagas only).

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

I. MAIN LABEL FOR FOOD CROP USES

8.10.1 Brassica Vegetables

LABELED CROPS: Broccoli, Chinese broccoli (gai lan), Broccoli raab (rapini), Brussels sprouts, Cabbage, Chinese cabbage (bok choy), Chinese cabbage (napa), Chinese mustard cabbage (gai choy), Cauliflower, Cavalo broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens.

8.10.2 Bulb Vegetables

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Welsh onion, Shallot.

8.10.3 Cucurbit Vegetables and fruits

LABELED CROPS: Chayote (fruit), Chinese waxgourd (Chinese preserving melon), Citron melon, Cucumber, Gherkin, Edible gourd (includes hyotan, cucuzza, hechima, Chinese okra), Melons (all), *Momordica* spp (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (includes cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey ball melon, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon), Pumpkin, Summer squash (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Winter squash (includes butternut squash, calabaza, hubbard squash, acorn squash, spaghetti squash), Watermelon.

PRECAUTIONS, RESTRICTIONS: For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all), Muskmelon, Persian melon, Pumpkin, Squash (summer, winter), and Watermelon, allow at least 3 days between application and planting.

8.10.4 Leafy Vegetables

LABELED CROPS: Amaranth (Chinese spinach), Arugula (roquette), Beet greens, Cardoon, Celery, Chinese celery, Celtuce, Chaya, Chervil, Edible-leaved chrysanthemum, Garland chrysanthemum, Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Florence fennel, Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach, New Zealand spinach, Vine spinach, Swiss chard, Watercress (upland), Water spinach.

PRECAUTIONS, RESTRICTIONS: For Watercress, avoid applications within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.

8.10.5 Fruiting Vegetables

LABELED CROPS: Eggplant, Groundcherry (*Physalis* spp), Pepino, Pepper (includes bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato

PRECAUTIONS, RESTRICTIONS: For Eggplant, Ground cherry, Pepper (all), and Tomatillo, allow at least 3 days between application and planting. For Tomato, do not make hooded or shielded sprayer applications in row middles because of the potential for crop injury.

8.10.6 Legume Vegetables (succulent or dried)

LABELED CROPS: Bean (*Lupinus*: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (*Phaseolus*: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (*Vigna*: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil, Pea (*Pisum*:

I. MAIN LABEL FOR FOOD CROP USES

includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean.

8.10.7 Root and Tuber Vegetables

LABELED CROPS: Arracacha, Arrowroot, Chinese artichoke, Jerusalem artichoke, Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celeriac, Chayote (root), Chervil (turnip-rooted), Chicory, Chufa, Dasheen (taro), Galangal, Ginger, Ginseng, Horseradish, Leren, Kava (turnip-rooted), Parsley (turnip rooted), Parsnip, Potato, Radish, Oriental radish, Rutabaga, Salsify, Black salsify, Spanish salsify, Skirret, Sweet potato, Tanier, Turmeric, Turnip, Wasabi, Yacon, Yam bean, True yam.

Directed applications (Non-Bearing Ginseng Only)

USE INSTRUCTIONS: This product may be used for general weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.

PRECAUTIONS, RESTRICTIONS: Direct applications so that there is no contact of this product with the ginseng plant. Applications must be made at least one year prior to harvest.

Over-the-top wiper applications (rutabagas only)

USE INSTRUCTIONS: Wiper applicators may be used over-the-top of rutabagas.

PRECAUTIONS, RESTRICTIONS: Allow at least 14 days between application and harvest of rutabagas.

8.11 Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar beet.

TYPES OF APPLICATIONS: Those listed in Section 8.0 plus the following: General Weed Control, Site Preparation, Spot Treatment (Asparagus)

For Roundup Ready sugar beets, see the "ROUNDUP READY CROPS" section of this label.

PRECAUTIONS, RESTRICTIONS: Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result. When making preemergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles should be made prior to vine development otherwise severe injury or destruction may result. Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest. Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional information.

General weed control, site preparation

USE INSTRUCTIONS: This product may be applied for general weed control or for site preparation prior to planting or transplanting crops listed in this section.

PRECAUTIONS, RESTRICTIONS: When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from

I. MAIN LABEL FOR FOOD CROP USES

the plastic prior to planting. Residues can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care should be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings.

Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

Spot treatment (Asparagus)

USE INSTRUCTIONS: This product may be applied immediately after cutting, but prior to the emergence of new spears.

PRECAUTIONS, RESTRICTIONS: Do not treat more than 10 percent of the total field area to be harvested. Do not harvest within 5 days of treatment.

Post-harvest (Asparagus)

USE INSTRUCTIONS: This product may be applied after the last harvest and all spears have been removed. If spears are allowed to regrow, delay application until ferns have developed. Delayed treatments should be applied as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.

PRECAUTIONS, RESTRICTIONS: Direct contact of the spray with the asparagus may result in serious crop injury. Select and use recommended types of spray equipment for postemergence post-harvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.

9.0 TREE, VINE, AND SHRUB CROPS (Alphabetical)

NOTE: THIS SECTION GIVES GENERAL DIRECTIONS THAT APPLY TO ALL LISTED TREE, VINE, AND SHRUB CROPS WITHIN SECTION 9 GROUPED ALPHABETICALLY BELOW. SEE THE INDIVIDUAL CROP CATEGORIES FOR SPECIFIC INSTRUCTIONS, PREHARVEST INTERVALS, PRECAUTIONS AND RESTRICTIONS.

TYPES OF APPLICATIONS: Preplant (Site Preparation) Broadcast Sprays, General Weed Control, Middles (between rows of trees, vines or bushes), Strips (within rows of trees, vines or bushes), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, CDA equipment, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

GENERAL USE INSTRUCTIONS:

This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for general weed control or perennial grass suppression in established tree fruit and nut groves, orchards, berries, and vineyards. It may also be used for site preparation prior to planting or transplanting these crops. Apply 12 fluid ounces to 3.3 quarts per acre according to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE TABLES" sections of this label. Utilize rates at the higher end of the recommended rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7 quarts per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or

515

I. MAIN LABEL FOR FOOD CROP USES

separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

GENERAL PRECAUTIONS, RESTRICTIONS:

Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of trees, canes and vines. Avoid applications when recent pruning wounds or other mechanical injury has occurred. Contact of this product with other than matured brown bark can result in serious crop damage or destruction. Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance. For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) should be used to minimize the potential for leakage or drift of herbicide sprays onto crop. For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back. Only wipers or shielded applicators capable of preventing all contact with crop may be used. See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

Allow a minimum of 3 days between application and transplanting.

Middles (between rows)

USE INSTRUCTIONS: This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

TANK MIXTURES: A tank mixture of this product plus Goal 2XL may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 12 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control annual weeds with a maximum height or diameter of 6 inches, including crabgrass, common groundsel, junglerice, common lambsquarters, redroot pigweed, London rocket, common ryegrass, shepherd's-purse, annual sowthistle, filaree (suppression), horseweed/marestail, stinging nettle and common purslane (suppression). 12 to 22 fluid ounces per acre of this product plus 3 to 12 fluid ounces per acre of Goal 2XL will control common cheeseweed (malva) or hairy fleabane with a maximum height or diameter of 3 inches.

Strips (in rows)

TANK MIXTURES: This product may be applied in rows of tree or vine crops in tank mixtures with the following products:

DEVINOL™ 50 DF	SIMAZINE 4L
DIREX™ 4L	SIMAZINE 80W
GOAL 2XL	SIM-TROL™ 4L
KARMEX DF	SOLICAM™ DF
KROVAR I	SURFLAN™ AS
PROWL	SURFLAN 75W
PRINCEP CALIBER™ 90	

Do not apply these tank mixtures in Puerto Rico.

Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial Grass Suppression

3/6

1. MAIN LABEL FOR FOOD CROP USES

This product will suppress perennial grasses such as bahiagrass, Bermudagrass, tall fescue, orchardgrass, Kentucky bluegrass, and quackgrass that are grown as ground covers in tree and vine crops.

For suppression of tall fescue, fine fescue, orchardgrass and quackgrass, apply 4 fluid ounces of this product in 10 to 20 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 25 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 22 to 44 fluid ounces of this product in 3 to 20 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4 to 12 fluid ounces of this product per acre east of the Rocky Mountains and 12 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3 to 20 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, rates of 4 to 7 fluid ounces of this product per acre should be used in shaded conditions or where a lesser degree of suppression is desired.

Cut Stump

USE INSTRUCTIONS: Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor.

Fruit Trees: Apple, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio, Walnut (black, English).

Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

PRECAUTIONS, RESTRICTIONS: DO NOT MAKE CUT-STUMP APPLICATIONS WHEN THE ROOTS OF ADJACENT DESIRABLE TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. INJURY RESULTING FROM ROOT GRAFTING MAY OCCUR IN ADJACENT TREES. Some sprouts,

stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

9.1 Berry Crops

LABELED CROPS: Blackberry (including bingleberry, black satin berry, boysenberry, Cherokee blackberry, chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, juneberry, lavacaberry, lowberry, lucretiaberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, and youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Raspberry (black, red), Salal.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Spot Treatment in Cranberry Production and Post Harvest Treatments in Cranberry Production.

PRECAUTIONS, RESTRICTIONS: To avoid damage, herbicide sprays must not be allowed to contact desirable vegetation, including green shoots, canes, or foliage. Allow a minimum of 30 days between last application and harvest in cranberries. Allow a minimum of 14 days between last application and harvest in other berry crops. Do not make directed sprays within the cranberry bush areas prior to berry harvest.

Spot Treatment in Cranberry Production

USE INSTRUCTIONS: Spot treatments may be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Hand-held sprayers or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 1.5 percent solution of this product. Spray to wet vegetation, not to run-off.

PRECAUTIONS, RESTRICTIONS: For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after draw down to ensure application to actively growing weeds. Allow a minimum of 30 days between last application and harvest of cranberries. Do not apply this material through the irrigation system. Do not make applications by air. Do not apply directly to water. Use nozzles that emit medium- to large-sized droplets to minimize drift in order to avoid crop injury.

Post-Harvest Treatments in Cranberry Production

USE INSTRUCTIONS: Application of this product may be made after the harvest of cranberries to control weeds growing within the field. Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers, or other appropriate application equipment listed under "APPLICATION EQUIPMENT AND TECHNIQUES" in this label may be used. If using hand-held sprayers, use a 0.4 to 0.7 percent solution of this product. Spray to wet vegetation, not to run-off. If using hand-held boom sprayers, apply 44 to 86 fluid ounces of this product per acre.

PRECAUTIONS, RESTRICTIONS: Make applications only after cranberries have been harvested. Do not treat more than 10 percent of the total bog. Allow a minimum of 6 months after last application and next harvest of cranberries. Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water. Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.

9.2 Citrus

I. MAIN LABEL FOR FOOD CROP USES

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (all), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS (The recommendations below pertain to applications in Florida and Texas):

For burndown or control of the weeds listed below, apply the recommended rates of this product in 3 to 30 gallons of water per acre. Where weed foliage is dense, use 10 to 30 gallons of water per acre.

For goatweed, apply 44 to 64 fluid ounces of this product per acre. Apply in 20 to 30 gallons of water per acre when plants are actively growing. Use 44 fluid ounces per acre when plants are less than 8 inches tall and 64 fluid ounces per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar™ I or Karmex™ may improve control. Refer to the individual product labels for specific crops, rates, geographic restrictions and precautionary statements.

Perennial weeds:

S = Suppression

B = Burndown

PC = Partial control

C = Control

WEED SPECIES	[INSERT BRAND NAME RATE PER ACRE]			
	0.7 QT	1.3 QT	2 QT	3.3 QT
Bermudagrass	B	--	PC	C
Guineagrass				
Texas and Florida Ridge	B	C	C	C
Florida Flatwoods	--	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	--	PC	C

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in citrus crops. For citron groves, apply as directed sprays only.

9.3 Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (fruit and pads), Palm (heart, leaves), Palm (oil).

TYPES OF APPLICATIONS: Those listed in Section 9.0.

9.4 Non-Food Tree Crops

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas trees, Other non-food tree crops.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

Directed Sprays, Spot Treatment, Wipers

USE INSTRUCTIONS: This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas trees and other non-food tree crops.

I. MAIN LABEL FOR FOOD CROP USES

PRECAUTIONS, RESTRICTIONS: Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. **THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-TOP BROADCAST SPRAY IN CHRISTMAS TREES AND OTHER PINE TREES.**

Site Preparation

USE INSTRUCTIONS: This product may be used prior to planting Christmas trees.

PRECAUTIONS, RESTRICTIONS: Precautions should be taken to protect nontarget plants during site preparation applications.

9.5 Pome Fruit

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in pome crops.

9.6 Stone Fruit

LABELED CROPS: Apricot, Cherry (sweet, tart), Nectarine, Olive, Peach, Plum/Prune (all types), Plumcot.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 17 days between last application and harvest in stone fruit crops. For olive groves, apply as directed sprays only.

Restrictions on Application Equipment

For cherries, any application equipment listed in Section 9.0 may be used in all states.

Any application equipment listed in Section 9.0 may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In all other states, use wiper equipment only.

For PEACHES grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom sprayer or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low-hanging limbs at least 10 days prior to application. Avoid applications near trees with recent pruning wounds or other mechanical injury. Apply only near trees that have been planted in the orchard for 2 or more years. **EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.**

9.7 Tree Nuts

I. MAIN LABEL FOR FOOD CROP USES

LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (black, English)

TYPES OF APPLICATIONS: Those listed in Section 9.0.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut. Allow 14 days between application and harvest in coconut.

9.8 Tropical and Subtropical Trees and Fruits

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Illama, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS: Those listed in Section 9.0 plus Bananacide (banana only).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 1 day between last application and harvest in banana, guava, papaya, and plantain crops. Allow a minimum of 14 days between last application and harvest for any other tropical or subtropical tree fruit. Allow a minimum of 28 days between last application and harvest in coffee crops. In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.

Bananacide (Banana only)

USE INSTRUCTIONS: This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish disease free buffers around plantations. Remove all fruit from the plants within the treatment area prior to treatment. Inject 1/25 fluid ounce (1 mL) of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above the ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.

For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the banana bunchy top virus for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 1/2 fluid ounce (15 mL) of this product's concentrate per mat (or unit). Remove all fruit from plants and mats (or units) prior to treatment. Do not harvest any fruit or plant materials from treated mats (or units) following injection. Do not allow livestock to consume treated plant materials. Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for general weed control.

9.9 Vine Crops

LABELED CROPS: Grapes (raisin, table, wine) Hops, Kiwi, Passion fruit.

TYPES OF APPLICATIONS: Those listed in Section 9.0.

USE INSTRUCTIONS: Applications should not be made when green shoots, canes or foliage are in the spray zone.

I. MAIN LABEL FOR FOOD CROP USES

In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 14 days between last application and harvest in vine crops. Do not use selective equipment in kiwi.

10.0 PASTURE GRASSES, FORAGE LEGUMES AND RANGELANDS

10.1 Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types).

TYPES OF APPLICATIONS: Preplant, Preemergence, At-planting, Preharvest (Alfalfa only), Spot treatment or Wiper Applications (Alfalfa and Clover only), Renovation.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting crops listed in this section. Applications must be made prior to emergence of the crop.

PRECAUTIONS, RESTRICTIONS: If a single application is made at rates of 44 fluid ounces per acre or less, no waiting period between treatment and feeding or grazing is required. If applications rates greater than 44 fluid ounces per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Preharvest (Alfalfa only)

USE INSTRUCTIONS: This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds, including quackgrass, when applied prior to the harvest of alfalfa. The treated crop and weeds can be harvested and fed to livestock after 36 hours. Allow a minimum of 36 hours between application and harvest. Applications may be made at any time of the year. Make only one application to an existing stand of alfalfa per year. For control of quackgrass, apply in the spring, late summer or fall when quackgrass is actively growing. Treatments for quackgrass must be followed by deep tillage for complete control.

PRECAUTIONS, RESTRICTIONS: Do not apply more than 44 fluid ounces of this product per acre as a preharvest treatment. Preharvest application is not recommended for alfalfa grown for seed, as a reduction in germination or vigor may occur.

Spot Treatment or Wiper applications (Alfalfa and Clover only)

USE INSTRUCTIONS: This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total field area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

Renovation

USE INSTRUCTIONS: This product may be applied as a broadcast spray to renovate existing stands of alfalfa, clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application. If application rates of 44 fluid ounces per acre or less are used wait 36 hours after application before grazing or harvesting. If application rates greater than 44 fluid ounces per acre are used, wait 8 weeks between applications and grazing or harvesting.

10.2 Conservation Reserve Program (CRP)

TYPES OF APPLICATIONS: Renovation (rotating out of CRP), Site Preparation, Postemergence weed control in dormant CRP grasses, Wiper Applications.

Renovation (rotating out of CRP), Site Preparation

USE INSTRUCTIONS: This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.

Postemergence Weed Control in Dormant CRP Grasses, Wiper Applications

USE INSTRUCTIONS: This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 8 to 12 fluid ounces of this product per acre in early spring before desirable CRP grasses, such as crested and tall wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.

PRECAUTIONS, RESTRICTIONS: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.

10.3 Grass Seed Production

LABELED CROPS: Any grass (*Gramineae* family) except corn, sorghum, sugarcane and those listed above under "CEREAL CROPS".

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Shielded Sprayers, Wiper Applications, Spot Treatments, Creating Rows in Annual Ryegrass.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production. Applications must be made prior to the emergence of the crop to avoid crop injury. For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.

PRECAUTIONS, RESTRICTIONS: Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow proper translocation into underground plant parts.

1. MAIN LABEL FOR FOOD CROP USES

Do not feed or graze treated areas for 8 weeks following application.

Shielded Sprayers

USE INSTRUCTIONS: Apply 22 to 64 fluid ounces of this product as a broadcast spray in 10 to 20 gallons of water per acre to control weeds in the rows. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.

PRECAUTIONS, RESTRICTIONS: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. Such damage shall be the sole responsibility of the applicator.

Wiper Applications

PRECAUTIONS, RESTRICTIONS: Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators should be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation. Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when height of weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. Better results may be obtained if 2 applications are made in opposite directions.

Spot Treatments

USE INSTRUCTIONS: Use a 1 percent solution.

PRECAUTIONS, RESTRICTIONS: Apply this product prior to heading of grasses. Do not treat more than 10 percent of the total field area. The crop receiving the spray in the treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.

Creating Rows in Annual Ryegrass

USE INSTRUCTIONS: Use 12 to 22 fluid ounces of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.

PRECAUTIONS, RESTRICTIONS: Set nozzle heights to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use of low-pressure nozzles, or drop nozzles designed to target the application over a narrow band are recommended.

Grower assumes all responsibility for crop losses from misapplication.

10.4 Pastures

LABELED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed above under "CEREAL CROPS". Including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guinea grass, Kikuyu grass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass.

TYPES OF APPLICATIONS: Preplant, Preemergence, Pasture Renovation, Spot Treatment, Wiper Application.

Preplant, Preemergence and Pasture Renovation

I. MAIN LABEL FOR FOOD CROP USES

USE INSTRUCTIONS: This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.

PRECAUTIONS, RESTRICTIONS: Remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.

Spot Treatment and Wiper Application

USE INSTRUCTIONS: This product may be applied as a spot treatment or with wiper applicators in pastures. Applications may be made in the same area at 30-day intervals.

PRECAUTIONS, RESTRICTIONS: For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled. No more than 10 percent of the total pasture area should be treated at one time. Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.

10.5 Rangelands

TYPES OF APPLICATIONS: Postemergence.

This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.

Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.

Postemergence

USE INSTRUCTIONS: Apply 8 to 12 fluid ounces of this product per acre to control or suppress many weeds, including downy brome, cheatgrass, cereal rye and jointed goatgrass in rangelands. Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourages perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.

For medusahead, apply 12 fluid ounces of this product per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn. Repeat applications in subsequent years may be necessary to eliminate the seedbank before reestablishing desirable perennial grasses in medusahead-dominated rangelands.

Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.

PRECAUTIONS, RESTRICTIONS: Do not use ammonium sulfate when spraying rangeland grasses with this product. Do not make more than one application per year.

Grazing of treated areas should be delayed to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.

10.6 Turf Grass Sod Production

1. MAIN LABEL FOR FOOD CROP USES

TYPES OF APPLICATIONS: Preplant, Preemergence, Renovation, Site Preparation, Spot Treatment.

Preplant, Preemergence, Renovation, Site Preparation

USE INSTRUCTIONS: This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for seed or sod. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control.

Desirable turf grasses may be planted following the above procedures.

PRECAUTIONS, RESTRICTIONS:

Do not feed or graze turf grass grown for seed or sod production for 8 weeks following application.

Spot Treatment

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass.

11.0 ROUNDUP READY CROPS

The following instructions or those separately published on Monsanto Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. Do NOT combine these instructions with other recommendations made for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

MONSANTO COMPANY RECOMMENDS USE OF THIS PRODUCT FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING THE ROUNDUP READY GENE.

Applying this product to crop varieties that are not designated as Roundup Ready will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain the Roundup Ready gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier or Monsanto representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectively controlling weeds in a Roundup Ready crop by applying glyphosate to the weeds and Roundup Ready crop are protected under several U.S. Patents, including 5,352,605 and 5,633,435. A license to use Roundup Ready seed must be obtained prior to use. Monsanto retains ownership of the gene and process technologies, and the Purchaser of the seed receives the right to use the licensed genes and technologies subject to the limited use license conditions. Seed containing the Roundup Ready trait cannot be used for research and demonstration, reverse engineering or in connection with herbicide registration. Progeny seed containing the Roundup Ready trait cannot be saved for replanting or transferred to others for replanting. Contact your Authorized Monsanto Retailer for information on obtaining a limited use license.

For ground applications with broadcast equipment, apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

386

I. MAIN LABEL FOR FOOD CROP USES

For aerial applications apply this product in 3 to 15 gallons of water per acre. See the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

For proper stewardship of aerial applications over-the-top of Roundup Ready crops, Monsanto recommends that growers and applicators read and follow all precautions and procedures contained in the use guide "A Guide to On-Target Aerial Application" available by calling 1-800-ROUNDUP (1-800-768-6387) or on the internet at www.FARMSOURCE™.com.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.

See the "MIXING and APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

Tank mixtures with other herbicides, insecticides, fungicides, micronutrients or foliar fertilizers may result in reduced weed control or crop injury and are NOT recommended for over-the-top applications of this product unless otherwise noted in this product label, supplemental labeling or fact sheets published separately by Monsanto.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for use instructions for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

NOTE: The following recommendations are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, a preplant burn-down treatment of this product is recommended to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. The second application should be made after some regrowth has occurred and at least 10 days after a previous application of this product.

11.1 Canola with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

DO NOT USE THIS PRODUCT ON CANOLA WITH THE ROUNDUP READY GENE PLANTED IN THE FOLLOWING STATES: ALABAMA, DELAWARE, FLORIDA, GEORGIA, KENTUCKY, MARYLAND, NEW JERSEY, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA AND WEST VIRGINIA.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY CANOLA MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE APPROVED DIRECTIONS FOR USE.

<u>Maximum Allowable Combined Application Quantities Per Season</u>

I. MAIN LABEL FOR FOOD CROP USES

Preplant, At-planting, Preemergence applications	44 fluid ounces per acre
Total in-crop application from emergence to 6-leaf stage	44 fluid ounces per acre

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting canola.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.

Weeds Controlled: For specific rates of application and instructions, refer to the "ANNUAL and PERENNIAL WEEDS RATE TABLES" in this booklet.

Single Application - Apply 12 to 22 fluid ounces per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications that may result in temporary yellowing, delayed flowering, and or growth reduction. Similar injury may result when applications of more than 12 fluid ounces per acre are applied after the 4-leaf stage.

Sequential Application - Apply 22 fluid ounces per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications are recommended for early emerging annual weeds and perennial weeds such as Canada thistle and quackgrass or when controlling weeds with multiple application times.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. No more than two over-the-top broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total in-crop application should not exceed 44 fluid ounces per acre. Allow a minimum of 60 days between last application and canola harvest.

11.2 Corn with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence (in-crop), Spot Treatment, Preharvest, Post-Harvest.

Maximum Allowable Combined Application Quantities Per Season	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from emergence through the V8 stage or 30 inches	44 fluid ounces per acre
Maximum preharvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	22 fluid ounces per acre

Preplant, Preemergence and At-Planting

328

1. MAIN LABEL FOR FOOD CROP USES

USE INSTRUCTIONS: This product may be applied alone or in a tank-mixture before, during or after planting corn.

TANK MIXTURES: This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled. Refer to the specific product label and observe all precautions and limitations on the label for any preemergence herbicide application, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines - the more restrictive requirements apply.

NOTE: For maximum weed control, a postemergence (in-crop) application of this product should be applied following the use of less than labeled rates of the preemergence residual products listed above.

Postemergence (in-crop)

USE INSTRUCTIONS: This product may be applied postemergence to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 30 inches, whichever comes first.

When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The postemergent application of 16 to 22 fluid ounces per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.

This product may be applied alone as a postemergence in-crop application to provide control of emerged weeds listed on this label. If new flushes of weeds occur, a sequential application of this product at 16 to 22 fluid ounces per acre will control the labeled grasses and broadleaf weeds.

TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit and Atrazine at labeled rates. Refer to the specific product label and observe all precautions and limitations on the label for all products used in tank mixtures, including application timing restrictions, soil restrictions, minimum recropping interval and rotational guidelines - the more restrictive requirements apply.

Tank-mix Partner	Maximum Height Of Corn For Application
Degree Degree Xtra Harness Harness Xtra Harness Xtra 5.6	11 inches
Bullet* Micro-Tech*	5 inches
Permit	30 inches
atrazine	12 inches

*Bullet and Micro-Tech are not registered for use as a postemergence application in Texas.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. Single in-crop applications of this product are not to exceed 22 fluid ounces per acre. Sequential in-crop applications of this product from emergence through the V8 stage or 30 inches must not exceed 44 fluid ounces per acre per growing season. Allow a minimum of 10 days between in-crop applications of this product. Allow a minimum of 50 days between application of this product and harvest of corn forage.

Preharvest

1. MAIN LABEL FOR FOOD CROP USES

USE INSTRUCTIONS: In Roundup Ready corn, up to 22 fluid ounces per acre of this product can be applied preharvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest.

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of corn. Higher rates may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

11.3 Cotton with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Over-the-Top, Selective Equipment, Preharvest.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from ground cracking to layby	2.5 quarts per acre
Maximum preharvest application rate	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application of this product from cotton emergence until harvest must not exceed 4 quarts per acre. NO MORE THAN TWO OVER-THE-TOP BROADCAST APPLICATIONS MAY BE MADE FROM CROP EMERGENCE THROUGH THE 4-LEAF (NODE) STAGE OF DEVELOPMENT. NO MORE THAN TWO APPLICATIONS SHOULD BE MADE FROM THE 5-LEAF STAGE THROUGH LAYBY. SEQUENTIAL IN-CROP OVER-THE-TOP OR POST-DIRECTED APPLICATIONS OF THIS PRODUCT MUST BE AT LEAST 10 DAYS APART AND COTTON MUST HAVE AT LEAST TWO NODES OF INCREMENTAL GROWTH BETWEEN APPLICATIONS. ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATION AND HARVEST.

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting cotton.

Over-the-Top

USE INSTRUCTIONS: This product may be applied by aerial or ground application equipment at rates up to ~~22~~ fluid ounces per acre per application postemergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.

Salvage Treatment. This treatment may be used after the 4-leaf stage of development and should only be used where weeds threaten to cause the loss of the crop. 1 quart per acre may be applied either as an over-the-top applications or as a post-directed treatments sprayed higher on the cotton plants and over the weeds. **NOTE: SALVAGE TREATMENTS WILL RESULT IN SIGNIFICANT BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS. NO MORE THAN ONE SALVAGE TREATMENT SHOULD BE USED PER GROWING SEASON.**

NOTE: For specific rates of application and instructions, refer to the "ANNUAL and PERENNIAL WEEDS RATE TABLES" in this booklet.

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Selective Equipment

USE INSTRUCTIONS: This product may be applied using precision post-directed or hooded sprayers at rates up to 22 fluid ounces per acre per application to Roundup Ready cotton through layby. At this stage, post-directed equipment should be used which directs the spray to the base of the cotton plants. Contact of the spray with cotton leaves should be avoided to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).

PRECAUTIONS, RESTRICTIONS: See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.

Preharvest

USE INSTRUCTIONS: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 44 fluid ounces of this product may be applied using either aerial or ground spray equipment. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton

PRECAUTIONS, RESTRICTIONS: Allow a minimum of 7 days between application and harvest of cotton. Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

11.4 Soybeans with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence, Preharvest, Post-Harvest.

THE USE OF THIS PRODUCT FOR IN-CROP APPLICATIONS OVER ROUNDUP READY CANOLA MAY NOT BE PRACTICED IN CALIFORNIA UNLESS THE APPLICATOR HAS AT THE TIME OF APPLICATION A CALIFORNIA-APPROVED SUPPLEMENTAL LABEL SPECIFYING THE APPROVED DIRECTIONS FOR USE.

I. MAIN LABEL FOR FOOD CROP USES

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Total in-crop applications from cracking throughout flowering	64 fluid ounces per acre
Maximum preharvest application rate	22 fluid ounces per acre

PRECAUTIONS/RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops.

Preplant, Preemergence and At-Planting

USE INSTRUCTIONS: This product may be applied before, during or after planting soybeans.

Postemergence

USE INSTRUCTIONS: When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for rate recommendations for specific annual weeds. In general, an initial application of 22 fluid ounces per acre on 2 to 8 inch tall weeds is recommended. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 44 fluid ounces per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.

A 22- to 44-fluid-ounce per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, common milkweed, field bindweed, hemp dogbane, horsenettle, marestail (horseweed), nutsedge, quackgrass, rhizome johnsongrass, redvine, trumpet creeper, swamp smartweed and wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth before spraying with this product.

Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. IN THE SOUTHERN STATES, A SEQUENTIAL APPLICATION OF THIS PRODUCT WILL BE REQUIRED TO CONTROL NEW FLUSHES OF WEEDS IN THE ROUNDUP READY SOYBEAN CROP. To control giant ragweed, it is recommended that 22 fluid ounces per acre of this product be applied when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.

PRECAUTIONS, RESTRICTIONS: The combined total application from crop emergence through harvest must not exceed 64 fluid ounces per acre. The maximum rate for any single in-crop application is 44 fluid ounces per acre. The maximum combined total of this product that can be applied during flowering is 44 fluid ounces per acre.

Preharvest

USE INSTRUCTIONS: This product provides weed control when applied prior to harvest of soybeans. Up to 22 fluid ounces per acre of this product can be applied by aerial or ground application.

PRECAUTIONS, RESTRICTIONS: Care should be taken to avoid excessive seed shatter loss due to ground application equipment. Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay.

1. MAIN LABEL FOR FOOD CROP USES

Post-Harvest

USE INSTRUCTIONS: This product may be applied after harvest of Roundup Ready soybeans. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.

11.5 Sugar beets with the Roundup Ready Gene

TYPES OF APPLICATIONS: Preplant, At-Planting, Preemergence, Postemergence.

<u>Maximum Allowable Combined Application Quantities Per Season</u>	
Combined total per year for all applications	5.3 quarts per acre
Preplant, At-planting, Preemergence applications	3.3 quarts per acre
Emergence to 8-leaf stage	56 fluid ounces per acre
Between 8-leaf stage and canopy closure	44 fluid ounces per acre

PRECAUTIONS, RESTRICTIONS: See the "ROUNDUP READY CROPS" section of this label for general precautionary instructions for use in Roundup Ready crops. The combined total application from crop emergence through harvest must not exceed 3 quarts per acre. The maximum rate for any single application from crop emergence until the 8-leaf stage is 32 fluid ounces per acre. The maximum rate for any single application between the 8-leaf stage and canopy closure is 22 fluid ounces per acre. Allow a minimum of 30 days between last application and sugar beet harvest.

Preplant, At-Planting and Preemergence

USE INSTRUCTIONS: This product may be applied before, during or after planting of Roundup Ready sugar beets.

Postemergence

USE INSTRUCTIONS: This product may be applied postemergent over-the-top to Roundup Ready sugar beets from emergence to 30 days prior to harvest. To maximize yield potential spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. Refer to the "ANNUAL WEEDS RATE TABLES" in this label for rate recommendations for specific annual weeds. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.

12.0 NON-CROP USES AROUND THE FARMSTEAD

TYPES OF APPLICATIONS: General Weed Control, Trim-and-Edge, Greenhouse/Shadehouse, Chemical Mowing, Cut Stumps, Habitat Management.

12.1 General Weed Control and Trim-and-Edge

USE INSTRUCTIONS: This product may be used to control annual weeds, perennial weeds and woody brush which are found in any part of the farmstead, including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

I. MAIN LABEL FOR FOOD CROP USES

TANK MIXTURES: This product may be tank mixed with the following products. Refer to these product labels for approved farmstead sites and application rates. For annual weeds, use 22 fluid ounces per acre of this product when weeds are less than 6 inches tall, 32 fluid ounces per acre when weeds are 6 to 12 inches tall and 44 fluid ounces per acre when weeds are greater than 12 inches tall. For perennial weeds, apply 44 fluid ounces to 3.3 quarts per acre in these tank mixes. For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "ANNUAL WEEDS -- HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for recommended rates.

Arsenal	Plateau
Banvel/Clarity	Princep DF
Barricade 65WG	Princep Liquid
Diuron	Ronstar 50 WP
Endurance	Sahara
Escort	Simazine
Karmex DF	Surflan
Krovar I DF	Telar
Oust	Vanquish
Pendulum 3.3 EC	2,4-D
Pendulum WDG	

This product plus dicamba tank mixtures may not be applied by air in California.

12.2 Greenhouse/Shadehouse

This product may be used to control weeds in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

12.3 Chemical Mowing

USE INSTRUCTIONS: This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, bahiagrass or quackgrass covers. Use 12 fluid ounces of this product per acre when treating bermudagrass. Use 44 fluid ounces of this product per acre when treating torpedograss or paragrass. Apply treatments in 10 to 20 gallons of spray solution per acre. Chemical mowing applications may be made along farm ditches and other parts of farmsteads.

PRECAUTIONS, RESTRICTIONS: Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

12.4 Cut Stumps

TYPES OF APPLICATION: Treating cut stumps in any non-crop site listed on this label

USE INSTRUCTIONS: This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion

504

I. MAIN LABEL FOR FOOD CROP USES

Alder
Eucalyptus
Madrone
Oak
Pepper, brazilian
Pine, Austrian

Reed, giant
Salicedar
Sweetgum
Tan oak
Willow

PRECAUTIONS, RESTRICTIONS: Do not make cut stump applications when the roots of desirable woody brush or trees may be grafted to the roots of the cut stump. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

12.5 Habitat Management

TYPES OF USES: Habitat Restoration and Maintenance, Wildlife Food Plots.

Habitat Restoration and Maintenance

USE INSTRUCTIONS: This product may be used to control exotic and other undesirable vegetation in habitat management areas. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas. Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.

Wildlife Food Plots

USE INSTRUCTIONS: This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage.

13.0 ANNUAL WEEDS RATE TABLE (Alphabetically by Species)

WATER CARRIER VOLUMES OF 3 TO 10 GALLONS PER ACRE FOR GROUND APPLICATIONS AND 3 TO 5 GALLONS PER ACRE FOR AERIAL APPLICATIONS ARE RECOMMENDED.

Apply to actively growing annual weeds. Annual weeds are generally easiest to control when they are small.

Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

This product may be used up to 32 fluid ounces per acre where heavy weed densities exist.

ANNUAL WEEDS RATE TABLE

I. MAIN LABEL FOR FOOD CROP USES

WEED SPECIES	RATE (fluid ounces per acre)				
	12	16	22	28	32
	Maximum height/length (in inches)				
Ammannia, purple	3	6	12	-	18
Annoda, spurred	-	2	3	5	8
Barley	18	18 +	-	-	-
Barnyardgrass	-	3	6	7	9
Bassia, fivehook	-	-	6	-	-
Beggarweed, Florida	-	5	8	-	-
Bittercress	12	20	-	-	-
Bluegrass, annual	10	-	-	-	-
Bluegrass, bulbous	6	-	-	-	-
Brome, downy ^{1,2}	6	12	-	-	-
Brome, Japanese	6	12	24	-	-
Browntop panicum	6	8	12	-	24
Buckwheat, wild ³	-	1	2	-	-
Burcucumber	-	6	12	-	18
Buttercup	12	20	-	-	-
Carolina geranium	-	-	4	-	9
Carpetweed	-	6	12	-	-
Cheat ²	6	20	-	-	-
Chervil	20	-	-	-	-
Chickweed	-	12	18	-	-
Cocklebur	12	18	24	-	36
Copperleaf, hophornbeam	-	2	4	-	6
Copperleaf, Virginia	-	2	4	-	6
Coreopsis, plains	-	6	12	-	18
Corn, volunteer	6	12	20	-	-

346

1. MAIN LABEL FOR FOOD CROP USES

Corn speedwell	12	-	-	-	-
Crabgrass	3	6	12	-	-
Crowfootgrass	-	-	6	-	12
Cutleaf evening primrose	-	-	3	-	6
Devilsclaw (unicorn plant)	-	3	6	-	-
Dwarf dandelion	12	-	-	-	-
Eastern manna grass	8	12	-	-	-
Eclipta	-	4	8	12	-
Fall panicum	4	-	6	-	12
Falsedandelion	-	20	-	-	-
False flax, small seed	12	-	-	-	-
Fiddleneck	-	6	12	-	-
Field pennycress	6	12	-	-	-
Filaree	-	-	6	-	12
Fleabane, annual	6	20	-	-	-
Fleabane, hairy (<i>Conyza bonariensis</i>)	-	-	6	-	10
Fleabane, rough	3	6	12	-	-
Florida pusley	-	-	4	-	6
Foxtail, giant, bristly, yellow	6	12	20	-	-
Foxtail, Carolina	10	-	-	-	-
Foxtail, green	12	-	-	-	-
Goatgrass, jointed	6	12	-	-	-
Goosegrass	-	3	6	-	12
Grain sorghum (milo)	6	12	20	-	-
Groundcherry	-	3	6	-	9
Groundsel, common	-	6	10	-	-
Hemp sesbania	-	2	4	6	8

I. MAIN LABEL FOR FOOD CROP USES

Henbit	-	-	6	-	12
Horseweed/ Maretail (<i>Conyza canadensis</i>)	-	6	12	-	18
Itchgrass	6	8	12	-	18
Jimsonweed	-	-	12	-	18
Johnsongrass, seedling	6	12	18	-	24
Junglerice	-	3	6	7	9
Knotweed	-	-	6	-	12
Kochia ⁴	-	3 to 6	12	-	-
Lambsquarters	-	6	12	-	20
Little barley	6	12	-	-	-
London rocket	6	-	24	-	-
Mayweed	-	2	6	12	18
Morningglory, annual (<i>Ipomoea spp</i>)	-	-	3	-	6
Mustard, blue	6	12	18	-	-
Mustard, tansy	6	12	18	-	-
Mustard, tumble	6	12	18	-	-
Mustard, wild	6	12	18	-	-
Nightshade, black	-	4	6	-	12
Nightshade, hairy	-	4	6	-	12
Oats	3	6	18	-	-
Pigweed species	-	12	18	24	-
Prickly lettuce	-	6	12	-	-
Purslane	-	-	3	-	6
Ragweed, common	-	6	12	-	18
Ragweed, giant	-	6	12	-	18
Red rice	-	-	4	-	-
Rye, volunteer/cereal ²	6	18	18 +	-	-

376

I. MAIN LABEL FOR FOOD CROP USES

Ryegrass	-	-	6	-	12
Sandbur, field	6	12	-	-	-
Sandbur, longspine	6	12	-	-	-
Shattercane	6	12	20	-	-
Shepherd's-purse	6	12	-	-	-
Sicklepod	-	2	4	-	8
Signalgrass, broadleaf	-	3	6	7	9
Smartweed, ladysthumb	-	-	6	-	9
Smartweed, Pennsylvania	-	-	6	-	9
Sowthistle, annual	-	-	6	-	12
Spanishneedles	-	-	6	-	12
Speedwell, purslane	12	-	-	-	-
Sprangletop	6	12	20	-	-
Spurge, prostrate	-	6	12	-	-
Spurge, spotted	-	6	12	-	-
Spurry, umbrella	6	-	-	-	-
Stinkgrass	-	12	-	-	-
Sunflower	12	18	-	-	-
Swinecress	-	5	12	-	-
Teaweed/ Prickly sida	-	2	4	-	6
Texas panicum	6	8	12	-	24
Thistle, Russian ⁵	-	6	12	-	-
Velvetleaf	-	-	6	-	12
Virginia pepperweed	-	18	-	-	-
Waterhemp	-	-	6	-	12
Wheat ²	6	12	18	-	-
Wheat, (overwintered)	-	6	12	-	18

1. MAIN LABEL FOR FOOD CROP USES

Wild oats	3	6	18	-	-
Wild proso millet	-	6	12	-	18
Witchgrass	-	12	-	-	-
Woolly cupgrass	-	6	12	-	-
Yellow rocket	-	12	20	-	-

¹ For control of downy brome in no-till systems, use 16 fluid ounces per acre.

² Performance is better if application is made before this weed reaches the boot stage of growth.

³ Use 16 fluid ounces per acre of this product to control wild buckwheat in the cotyledon to 2-leaf stage. Use 22 fluid ounces per acre to control 2- to 4-leaf wild buckwheat. For improved control of wild buckwheat over 2 inches in size, use sequential treatments of 22 fluid ounces followed by 22 fluid ounces of this product per acre.

⁴ Do not treat kochia in the button stage.

⁵ Control of Russian thistle may vary based on environmental conditions and spray coverage. Whenever possible, a tank mixture with 2,4-D as described below may improve control.

13.1 Annual Weeds -- Rates for 10 to 40 Gallons per Acre

Apply 22 to 44 fluid ounces of this product per acre. Use 22 fluid ounces per acre if weeds are less than 6 inches tall, 32 fluid ounces per acre if weeds are 6 to 12 inches tall and 44 fluid ounces per acre if weeds are greater than 12 inches tall. These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10 to 40 gallons per acre for ground applications. Older, mature (hardened) annual weed species may require higher rates even if they meet the size requirements.

13.2 Annual Weeds -- Tank Mixtures with 2,4-D or Dicamba or Tordon 22K

8 to 12 fluid ounces of this product plus 1/4 pound of dicamba or 1/2 pound of 2,4-D or 1 to 2 fluid ounces of Tordon 22K per acre will control the following weeds with the maximum height or length indicated: 6" -- prickly lettuce, mare's tail/horseweed, morning glory, kochia (dicamba only) wild buckwheat (Tordon 22K only); 12" -- cocklebur, lambsquarters, pigweed, Russian thistle (2,4-D only).

12 fluid ounces of this product plus 1/2 pound of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: common ragweed, giant ragweed, Pennsylvania smartweed, and velvetleaf.

Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures. Some crop injury may occur if dicamba or Tordon 22K is applied within 45 days of planting.

DO NOT APPLY DICAMBA TANK MIXTURES BY AIR IN CALIFORNIA.

13.3 Annual Weeds -- Hand-Held or High-Volume Equipment

40X

I. MAIN LABEL FOR FOOD CROP USES

For control of weeds listed in the "ANNUAL WEEDS RATE TABLES", apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7 percent solution.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods that result in less than complete coverage, use a 4 percent solution for annual and perennial weeds and a 4 to 7 percent solution for woody brush and trees.

13.4 Annual Weeds -- Tank Mixtures with Atrazine for Fallow and Reduced Tillage Systems

For use only in Colorado, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, and Washington. In Oregon and Washington, do not exceed 1 pound of atrazine per acre.

16 to 20 fluid ounces of this product plus 1 to 2 pounds of atrazine per acre will control the following weeds: Barnyardgrass (requires 20 fluid ounces for control), Downy brome, Green foxtail, Lambsquarters, Prickly lettuce, Tansy mustard, Pigweed, Field sandbur, Stinkgrass, Russian thistle, Volunteer wheat, Witchgrass and Kochia (add 1/8 pound of dicamba for control).

14.0 PERENNIAL WEEDS RATE TABLE (Alphabetically by Species)

Apply to actively growing perennial weeds.

NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the recommended stages.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

Best results are obtained when soil moisture is adequate for active weed growth.

Weed Species	Rate (QT/A)	Water Volume (GPA)	Hand-Held % Solution
--------------	----------------	-----------------------	-------------------------

Alfalfa	1 - 1.5	3 - 10	1.5%
---------	---------	--------	------

Make applications after the last hay cutting in the fall. Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment. Applications should be followed with deep tillage at least 7 days after treatment, but before soil freeze-up.

Alligatorweed	3	3 - 20	1%
---------------	---	--------	----

For partial control, apply when most of the plants are in bloom. Repeat applications will be required to maintain control.

Anise (fennel)	--	--	1 - 1.5%
----------------	----	----	----------

1. MAIN LABEL FOR FOOD CROP USES

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.

Bahiagrass	2 - 3.3	3 - 20	1.5%
-------------------	----------------	---------------	-------------

Apply when most plants have reached the early head stage.

Bentgrass	1	10 - 20	1.5%
------------------	----------	----------------	-------------

For suppression in grass seed production areas. For ground applications only. Ensure entire crown area has resumed growth prior to a fall application. Bentgrass should have at least 3 inches of growth. Tillage prior to treatment should be avoided. Tillage 7 to 10 days after application is recommended for best results.

Bermudagrass	2 - 3.3	3 - 20	1.5%
---------------------	----------------	---------------	-------------

For control, apply 3.3 quarts of this product per acre. For partial control, apply 64 fluid ounces per acre. Treat when Bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control.

Bermudagrass, water (knotgrass)	0.7 - 1	5 - 10	1.5%
--	----------------	---------------	-------------

Apply 32 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water Bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only: Apply 22 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled prior to application. Apply prior to frost on water Bermudagrass that is 12 to 18 inches in length.

This product is not registered in California for use on water Bermudagrass.

Bindweed, field	0.4 - 3.3	3 - 20	1.5%
------------------------	------------------	---------------	-------------

Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.

For control, apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts east of the Mississippi River. Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Also for control, apply 44 fluid ounces of this product plus 1/2 pound of dicamba in 10 to 20 gallons of water per acre. Do not apply by air.

For suppression on irrigated agricultural land, apply 22 to 44 fluid ounces of this product plus 1 pound of 2,4-D in 10 to 20 gallons of water per acre with ground equipment only. Applications should be made following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.

For suppression, apply 12 fluid ounces of this product plus 1/2 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Apply by air in fallow and reduced tillage systems only. Applications should be delayed until maximum emergence has occurred and when vines are between 6 to 18 inches in length.

432

I. MAIN LABEL FOR FOOD CROP USES

In California only, apply 22 fluid ounces to 3.3 quarts of this product per acre. Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated land where annual tillage is performed, apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to bindweed that has reached a length of 12 inches or greater. Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.

Bluegrass, Kentucky	0.7 - 1.5	3 - 40	1.5 %
----------------------------	------------------	---------------	--------------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Blueweed, Texas	2 - 3.3	3 - 40	1.5 %
------------------------	----------------	---------------	--------------

Apply 2.5 to 3.3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.

Brackenfern	2 - 3	3 - 40	1 %
--------------------	--------------	---------------	------------

Apply to fully expanded fronds that are at least 18 inches long.

Bromegrass, smooth	0.7 - 1.5	3 - 40	1.5 %
---------------------------	------------------	---------------	--------------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Bursage, woolly-leaf	--	3 - 20	1.5 %
-----------------------------	-----------	---------------	--------------

For control, apply 44 fluid ounces of this product plus 1/2 pound of dicamba per acre. For partial control, apply 22 fluid ounces of this product plus 1/2 pound of dicamba per acre. Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.

Canarygrass, reed	1.5 - 2	3 - 40	1.5 %
--------------------------	----------------	---------------	--------------

For best results, apply when most plants have reached the boot-to-head stage of growth.

Cattail	2 - 3.3	3 - 40	1.5 %
----------------	----------------	---------------	--------------

Apply when most plants have reached the early head stage.

Clover; red or white	2 - 3.3	3 - 20	1.5 %
-----------------------------	----------------	---------------	--------------

Apply when most plants have reached the early bud stage.

Also for control, apply 12 to 22 fluid ounces of this product plus 1/2 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.

Cogongrass	2 - 3.3	10 - 40	1.5 %
-------------------	----------------	----------------	--------------

402

I. MAIN LABEL FOR FOOD CROP USES

Apply when cogongrass is at least 18 inches tall in late summer or fall. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

Dallisgrass	2 - 3.3	3 - 20	1.5%
-------------	---------	--------	------

Apply when most plants have reached the early head stage.

Dandelion	2 - 3.3	3 - 40	1.5%
-----------	---------	--------	------

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 12 fluid ounces of this product plus 1/2 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dock, curly	2 - 3.3	3 - 40	1.5%
-------------	---------	--------	------

Apply when most plants have reached the early bud stage of growth.

Also for control, apply 12 to 22 fluid ounces of this product plus 1/2 to 1 pound of 2,4-D in 3 to 10 gallons of water per acre.

Dogbane, hemp	3	3 - 40	1.5%
---------------	---	--------	------

Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. For suppression, apply 12 fluid ounces of this product plus 1/2 pound of 2,4-D in 3 to 10 gallons of water per acre for ground applications and 3 to 5 gallons of water per acre for aerial applications. Delay applications until maximum emergence of dogbane has occurred.

Fescue (except tall)	2 - 3.3	3 - 20	1.5%
----------------------	---------	--------	------

Apply when most plants have reached the early head stage.

Fescue, tall	0.7 - 2	3 - 40	1.5%
--------------	---------	--------	------

Apply 64 fluid ounces of this product per acre when most plants have reached boot-to-early seedhead stage of development.

Fall applications only: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to fescue in the fall when plants have 6 to 12 inches of new growth. A sequential application of 12 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.

Guineagrass	1.5 - 2	3 - 40	1%
-------------	---------	--------	----

Apply when most plants have reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. In Texas and ridge of Florida, use 44 fluid ounces for control. In the flatwoods region of Florida, 64 fluid ounces is required for control.

Horsenettle	2 - 3.3	3 - 20	1.5%
-------------	---------	--------	------

434

I. MAIN LABEL FOR FOOD CROP USES

Apply when most plants have reached the early bud stage.

Horseradish	3	3 - 40	1.5%
--------------------	----------	---------------	-------------

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Iceplant	--	--	1.5 - 2%
-----------------	-----------	-----------	-----------------

Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.

Jerusalem artichoke	2 - 3.3	3 - 20	1.5%
----------------------------	----------------	---------------	-------------

Apply when most plants are in the early bud stage.

Johnsongrass	0.4 - 2	3 - 40	1%
---------------------	----------------	---------------	-----------

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Allow 7 or more days after application before tillage. Do not tank mix with residual herbicides when using 22 fluid ounces of this product per acre.

For burndown of Johnsongrass, apply 12 fluid ounces of this product in 3 to 10 gallons of water per acre before the plants reach a height of 12 inches. For this use, allow at least 3 days after treatment before tillage.

Spot treatment (partial control or suppression)--Apply a 0.7 percent solution of this product when Johnsongrass is 12 to 18 inches in height. Coverage should be uniform and complete.

Kikuyugrass	1.5 - 2	3 - 40	1.5%
--------------------	----------------	---------------	-------------

Spray when most kikuyugrass is at least 8 inches in height (3- or 4-leaf stage of growth). Allow 3 or more days after application before tillage.

Knapweed	3	3 - 40	1.5%
-----------------	----------	---------------	-------------

Apply when most plants have reached the late bud to flower stage of growth. For best results, apply in late summer or fall.

Lantana	--	--	1%
----------------	-----------	-----------	-----------

Apply at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

Lespedeza	2 - 3.3	3 - 20	1.5%
------------------	----------------	---------------	-------------

Apply when most plants have reached the early bud stage.

1. MAIN LABEL FOR FOOD CROP USES

Milkweed, common	2	3 - 40	1.5 %
------------------	---	--------	-------

Apply when most plants have reached the late bud to flower stage of growth.

Muhly, wirestem	0.7 - 1.5	3 - 40	1.5 %
-----------------	-----------	--------	-------

Use 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons of water per acre or in pasture, sod, or non-crop areas. Spray when the wirestem muhly is 8 inches or more in height. Do not till between harvest and fall applications or in the fall or spring prior to spring applications. Allow 3 or more days after application before tillage.

Mullein, common	2 - 3.3	3 - 20	1.5 %
-----------------	---------	--------	-------

Apply when most plants are in the early bud stage.

Napiergrass	2 - 3.3	3 - 20	1.5 %
-------------	---------	--------	-------

Apply when most plants are in the early head stage.

Nightshade, silverleaf	1.5	3 - 10	1.5 %
------------------------	-----	--------	-------

Applications should be made when at least 60 percent of the plants have berries. Fall treatments must be applied before a killing frost.

Nutsedge, purple or yellow	0.4 - 2	3 - 40	1 - 1.5 %
-------------------------------	---------	--------	-----------

Apply 64 fluid ounces of this product per acre or apply a 1 to 1.5 percent solution for control of nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets that have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.

Sequential applications: 22 to 44 fluid ounces of this product in 3 to 10 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3- to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3- to 5-leaf stage. Subsequent applications will be necessary for long-term control.

For partial control of existing plants, apply 12 to 44 fluid ounces of this product in 3 to 40 gallons of water per acre. Treat when plants have 3 to 5 leaves and most are less than 6 inches tall. Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.

Orchardgrass	0.7 - 1.5	3 - 40	1.5 %
--------------	-----------	--------	-------

Apply 44 fluid ounces of this product in 10 to 40 gallons of water per acre when most plants have reached boot-to-early seedhead stage of development. For partial control in pasture or hay crop renovation, apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.

Orchardgrass sods going to no-till corn: Apply 22 to 32 fluid ounces of this product in 3 to 10 gallons of water per acre. Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications. Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.

4049

1. MAIN LABEL FOR FOOD CROP USES

Pampasgrass	--	--	1 - 1.5%
--------------------	----	----	-----------------

Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.

Paragrass	2 - 3.3	3 - 20	1.5%
------------------	----------------	---------------	-------------

Apply when most plants are in the early head stage.

Phragmites	2 - 3.3	10 - 40	1 - 1.5%
-------------------	----------------	----------------	-----------------

For partial control, and best results, treat during late summer or fall when plants are actively growing and in full bloom. Treatment before or after this stage may lead to reduced control. Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

Poison hemlock	--	--	1 - 1.5%
-----------------------	----	----	-----------------

For hand held, apply as a spray-to-wet treatment. Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth. Thorough coverage is necessary for best control.

Pokeweed, common	1	3 - 40	1.5%
-------------------------	----------	---------------	-------------

Apply to actively growing plants up to 24 inches tall.

Quackgrass	0.7 - 2	3 - 40	1.5%
-------------------	----------------	---------------	-------------

In annual cropping systems, or in pastures and sods followed by deep tillage: Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. For 10 to 40 gallons of water per acre, apply 44 fluid ounces of this product. Do not tank mix with residual herbicides when using the 22-fluid-ounce rate. Spray when quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application. Allow 3 or more days after application before tillage. In pastures or sods, use a moldboard plow for best results.

In pastures, sods or non-crop areas where deep tillage does not follow application: Apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre when the quackgrass is greater than 8 inches tall.

Redvine	0.5 - 1.5	5 - 10	1.5%
----------------	------------------	---------------	-------------

For suppression, apply 16 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 44 fluid ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply in late September or early October to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Reed, giant	--	--	1.5%
--------------------	----	----	-------------

Best results are obtained when applications are made in late summer to fall.

Ryegrass, perennial	0.7 - 2	3 - 40	1%
----------------------------	----------------	---------------	-----------

In annual cropping systems apply 22 to 44 fluid ounces of this product per acre. Apply 22 fluid ounces of this product in 3 to 10 gallons of water per acre. Use 44 fluid ounces of this product when applying 10 to 40 gallons

457

I. MAIN LABEL FOR FOOD CROP USES

of water per acre. In non-crop, or areas where annual tillage (no-till) is not practiced, apply 44 to 64 fluid ounces of this product in 10 to 40 gallons of water per acre.

For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using 1 quart of this product per acre.

Smartweed, swamp	2 - 3.3	3 - 40	1.5%
------------------	---------	--------	------

Apply when most plants have reached the early bud stage of growth. Also for control, apply 12 fluid ounces of this product plus 1/2 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall.

Sowthistle, perennial	1.5 - 2	3 - 40	1.5%
-----------------------	---------	--------	------

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

Spurge, leafy	--	3 - 10	1.5%
---------------	----	--------	------

For suppression, apply 12 fluid ounces of this product plus 1/2 pound of 2,4-D in 3 to 10 gallons of water per acre in the late summer or fall. If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.

Starthistle, yellow	1.5	10 - 40	1.5%
---------------------	-----	---------	------

Best results are obtained when applications are made during the rosette, bolting and early flower stages.

Sweet potato, wild	--	--	1.5%
--------------------	----	----	------

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, artichoke	--	--	1.5%
--------------------	----	----	------

For partial control, apply to plants that are at or beyond the bloom stage of growth. Repeat applications may be required.

Thistle, Canada	1.5 - 2	3 - 40	1.5%
-----------------	---------	--------	------

Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.

For suppression in the spring, apply 22 fluid ounces of this product, or 12 fluid ounces of this product plus 1/2 pound of 2,4-D, in 3 to 10 gallons of water per acre. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.

Timothy	1.5 - 2	3 - 40	1.5%
---------	---------	--------	------

488

I. MAIN LABEL FOR FOOD CROP USES

For best results, apply when most plants have reached the boot-to-head stage of growth.

Torpedograss	2.5 - 3.3	3 - 40	1.5 %
---------------------	------------------	---------------	--------------

For partial control, apply when most plants are at or beyond the seedhead stage of growth. Repeat applications will be required to maintain control. Fall treatments must be applied before frost.

Trumpet creeper	1.5	5 - 10	1.5 %
------------------------	------------	---------------	--------------

For partial control, apply in late September or October, to plants that are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Vaseygrass	2 - 3.3	3 - 20	1.5 %
-------------------	----------------	---------------	--------------

Apply when most plants are in the early head stage.

Velvetgrass	2 - 3.3	3 - 20	1.5 %
--------------------	----------------	---------------	--------------

Apply when most plants are in the early head stage.

Wheatgrass, western	1.5 - 2	3 - 40	1.5 %
----------------------------	----------------	---------------	--------------

For best results, apply when most plants have reached the boot-to-head stage of growth.

15.0 WOODY BRUSH AND TREES RATE TABLE

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Unless otherwise directed, apply broadcast treatments in 3 - 40 gallons of water per acre. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Rate (QT/A)	Hand-Held % Solution	Comments
---------------------	------------------------	---------------------------------	-----------------

PC = Partial control; C = Control

Alder	2 - 3	1%	C
Ash	1.5 - 3.3	1 - 1.5%	PC
Aspen, quaking	1.5 - 2	1%	C

I. MAIN LABEL FOR FOOD CROP USES

Bearmat (Bearclover)	1.5 - 3.3	1 - 1.5%	PC
Beech	1.5 - 3.3	1 - 1.5%	PC
Birch	1.5 - 2	1%	C
Blackberry	2 - 3	1%	C

Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a 0.7 percent solution of this product. For control of blackberries after leaf drop and until killing frost or as long as stems are green, apply 2 to 2.5 quarts of this product in 10 to 40 gallons of water per acre.

Blackgum	1.5 - 3.3	1 - 1.5%	C
Bracken	1.5 - 3.3	1 - 1.5%	C
Broom; French, Scotch	--	1 - 1.5%	C
Buckwheat, California	--	1 - 1.5%	PC

Thorough coverage of foliage is necessary for best results.

Cascara	1.5 - 3.3	1 - 1.5%	PC
Catsclaw	--	1%	PC
Ceanothus	1.5 - 3.3	1 - 1.5%	PC
Chamise	--	1%	C

Thorough coverage of foliage is necessary for best results.

Cherry; bitter, black, pin	1.5 - 2	1%	C
Coyote brush	--	1 - 1.5%	C

Apply when at least 50 percent of the new leaves are fully developed.

Dogwood	1.5 - 3.3	1 - 1.5%	PC
Elderberry	1.5 - 2	1%	C
Elm	1.5 - 3.3	1 - 1.5%	PC
Eucalyptus	--	1.5%	C

412

I. MAIN LABEL FOR FOOD CROP USES

For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.

Florida holly (Brazilian Peppertree)	1.5 - 3.3	1 - 1.5%	PC
Gorse	1.5 - 3.3	1 - 1.5%	PC
Hasardia	--	1 - 1.5%	PC.

Thorough coverage of foliage is necessary for best results.

Hawthorn	1.5 - 2	1%	C
Hazel	1.5 - 2	1%	C
Hickory	1.5 - 3.3	1 - 1.5%	PC
Honeysuckle	2 - 3	1%	C
Hornbeam, American	1.5 - 3.3	1 - 1.5%	PC
Kudzu	2.5 - 3.3	1.5%	C

Repeat applications may be required to maintain control.

Locust, black	1.5 - 3	1 - 1.5%	PC
Madrone resprouts	--	1.5%	PC.

Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.

Manzanita	1.5 - 3.3	1 - 1.5%	PC
Maple, red	1.5 - 3	1%	C

Apply a 1 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 44 to 86 fluid ounces of this product per acre.

Maple, sugar	--	1%	C
--------------	----	----	---

Apply when at least 50 percent of the new leaves are fully developed.

Monkey flower	--	1 - 1.5%	PC
---------------	----	----------	----

Thorough coverage of foliage is necessary for best results.

Oak; black, white	1.5 - 3	1 - 1.5%	PC
Oak, post	2 - 3	1%	C

44

I. MAIN LABEL FOR FOOD CROP USES

Oak; northern,	--	1%	C
----------------	----	----	---

Apply when at least 50 percent of the new pin leaves are fully developed

Oak; southern red	1.5 - 2	1%	C
-------------------	---------	----	---

Persimmon	1.5 - 3.3	1 - 1.5%	PC
-----------	-----------	----------	----

Pine	1.5 - 3.3	1 - 1.5%	C
------	-----------	----------	---

Poison ivy/ Poison oak	2.5 - 3.3	1.5%	C
---------------------------	-----------	------	---

Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

Poplar, yellow	1.5 - 3.3	1 - 1.5%	PC
----------------	-----------	----------	----

Redbud, eastern	1.5 - 3.3	1 - 1.5%	C
-----------------	-----------	----------	---

Rose, multiflora	1.5	1%	C
------------------	-----	----	---

Treatments should be made prior to leaf deterioration by leaf-eating insects.

Russian olive	1.5 - 3.3	1 - 1.5%	PC
---------------	-----------	----------	----

Sage, black	--	1%	C
-------------	----	----	---

Thorough coverage of foliage is necessary for best results.

Sage, white	1.5 - 3.3	1 - 1.5%	PC
-------------	-----------	----------	----

Sage brush, California--		1%	C
--------------------------	--	----	---

Thorough coverage of foliage is necessary for best results.

Salmonberry	1.5 - 2	1%	C
-------------	---------	----	---

Salt-cedar	1.5 - 3.3	1 - 1.5%	C
------------	-----------	----------	---

Sassafras	1.5 - 3.3	1 - 1.5%	PC
-----------	-----------	----------	----

Sourwood	1.5 - 3.3	1 - 1.5%	PC
----------	-----------	----------	----

Sumac; poison, smooth, winged	1.5 - 3	1 - 1.5%	PC
-------------------------------	---------	----------	----

Sweetgum	1.5 - 2	1%	C
----------	---------	----	---

Swordfern	1.5 - 3.3	1 - 1.5%	PC
-----------	-----------	----------	----

4/12

I. MAIN LABEL FOR FOOD CROP USES

Tallowtree, Chinese	--	1%	C
---------------------	----	----	---

Thorough coverage of foliage is necessary for best results

Tan oak resprouts	--	1.5%	PC
-------------------	----	------	----

Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.

Thimbleberry	1.5 - 2	1%	C
--------------	---------	----	---

Tobacco, tree	--	1 - 1.5%	PC
---------------	----	----------	----

Trumpet creeper	1.5 - 2	1%	C
-----------------	---------	----	---

Vine maple	1.5 - 3.3	1 - 1.5%	PC
------------	-----------	----------	----

Virginia creeper	1.5 - 3.3	1 - 1.5%	C
------------------	-----------	----------	---

Waxmyrtle, southern	1.5 - 3.3	1 - 1.5%	PC
------------------------	-----------	----------	----

Willow	2 - 3	1%	C
--------	-------	----	---

16.0 LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions - beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

For over-the-top uses on Roundup Ready crop varieties crop safety and weed control performance are not warranted by Monsanto when this product is used in conjunction with "brown bag" or "bin run" seed saved from previous year's production and replanted.

46

I. MAIN LABEL FOR FOOD CROP USES

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

Amplify, Bullet, Degree, Farmsource, Harness, Lariat, Lasso, Micro-Tech, Monsanto and Vine symbol, Permit Roundup Original, Roundup UltraMAX, and TransSorb are trademarks of Monsanto Technology LLC.

Assure, Authority, Canopy, Krovar, Leadoff and Lexone are trademarks of E.I. duPont de Nemours & Co. Inc.

Direx, Karmex, Linex and Lorox are trademarks of Griffin LLC.

Bicep MAGNUM, Dual MAGNUM, Flexstar, Fusion, Princep Caliber, Reflex and Solicam are trademarks of Syngenta CropProtection Inc.

Firstate, Fultime, Python, Surflan, Topnotch and Tordon are trademarks of Dow AgroSciences LLC.

Banvel, Clarity, Distinct, Frontier, Guardsman, Marksman, Outlook, Prowl, Pursuit, Pursuit Plus, Scepter, Squadron and Steel are trademarks of BASF Corp.

Balance, Folex, Ginstar, and Prep are trademarks of Aventis CropSciences.

Goal is a trademark of Rohm and Haas Company.

Axiom, DEF, Domain, Epic, Sencor and Turbo are trademarks of Bayer Crop Protection.

Aim, Command and Gauntlet are trademarks of FMC Corporation.

Devrinol is a trademark of United Phosphorus Inc.

Sim-Trol is a trademark of Sipcam Agro USA, Inc.

Valor is a trademark of Valent USA Corporation

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-LGT

In case of an emergency involving this product,
Call Collect, day or night, (314) 694-4000.

© [DATE] MONSANTO COMPANY
ST. LOUIS, MISSOURI, 63167 USA

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

Table of Contents: Crop Supplemental labeling

	Name	Approval Date*	
A	FOR USE IN DORMANT ALFALFA	26-Aug-1997	
B	FOR THE CONTROL OF ANNUAL WEEDS IN COASTAL BERMUDAGRASS PASTURES PRIOR TO SPRING GROWTH OR IMMEDIATELY AFTER FIRST CUTTING	7-Nov-1995	
C	FOR DISTRIBUTION AND USE ONLY WITHIN SOUTH DAKOTA. FOR NON-SELECTIVE CONTROL OF LISTED ANNUAL WEEDS IN SMALL GRAIN CROPPING SYSTEMS	11-Dec-1996	
D	TANK MIX WITH Aim® FOR IMPROVED SYMPTOMS IN PRE-PLANT APPLICATIONS IN CORN, SOYBEANS OR WHEAT	16-Feb-2000	
E	TANK MIX WITH RESOURCE® FOR IMPROVED SYMPTOMS IN PRE-PLANT APPLICATIONS IN CORN OR SOYBEANS	16-Feb-2000	
F	FOR AERIAL APPLICATION IN CALIFORNIA ONLY	29-Dec-2000	
G	FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY (From February 15 through March 31 Only)	7-Nov-1995	
H	FOR AERIAL APPLICATION IN ARKANSAS ONLY	11-Feb-1997	
I	USE ONLY FOR SEED PRODUCTION OF ALFALFA WITH THE ROUNDUP READY® GENE	16-Feb-2000	
J	USE ONLY FOR SEED PRODUCTION OF LETTUCE WITH THE ROUNDUP READY® GENE	16-Feb-2000	
K	USE ONLY FOR SEED PRODUCTION OF RICE WITH THE ROUNDUP READY® GENE	11-Aug-1999	
L	FOR USE ONLY FOR SEED PRODUCTION OF WHEAT WITH THE ROUNDUP READY® GENE	29-Sep-1999	
M	FOR CONTROLLING BARNYARDGRASS (<i>ECHINOCHLOA CRUS-GALLI</i>) IN RICE USING RENOVATION TREATMENTS IN CALIFORNIA ONLY	14-May-2001	
N	FOR NEW COTTON LINES WITH THE ROUNDUP READY GENE - IN-CROP APPLICATIONS	11-Aug-1999	
O	ADDITION OF SURFACTANT FOR APPLICATIONS WITH [INSERT BRAND NAME]	11/30/99	
P	ADDITION OF SURFACTANT FOR APPLICATIONS WITH [INSERT BRAND NAME] (Alternate version)	11/30/99	

* Original approval of these uses with Roundup Ultra or Roundup UltraMAX herbicides.

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR [INSERT BRAND NAME] BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using [INSERT BRAND NAME] as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

[INSERT BRAND NAME HERE]

Herbicide

EPA Reg. No. 524-LGT

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

[INSERT BRAND NAME] is a registered trademark of Monsanto Technology LLC.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for [INSERT BRAND NAME] for essential product performance information.

Read the "Limit of Warranty and Liability" in the label booklet for [INSERT BRAND NAME] before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

© [DATE] MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

A. FOR USE IN DORMANT ALFALFA

RECOMMENDATIONS

This product will control or suppress many weeds, including quackgrass, downy brome and cheatgrass in dormant alfalfa.

Apply 6 to 8 fluid ounces per acre of this product. Apply in the spring to alfalfa that is dormant. Applications should be made after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliate leaf of the alfalfa will cause growth reduction and reduced crop yield.

Do not use ammonium sulfate when spraying dormant alfalfa with [INSERT BRAND NAME].

Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated.

Do not make more than one application per year.

Allow 36 hours after application before grazing livestock or harvesting.

Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off.

Application of this product is limited to persons who have attended a Monsanto-approved training program. Application of this product can cause crop injury. Any crop injury is the sole responsibility of the applicator.

B. FOR THE CONTROL OF ANNUAL WEEDS IN COASTAL BERMUDAGRASS PASTURES PRIOR TO SPRING GROWTH OR IMMEDIATELY AFTER FIRST CUTTING

RECOMMENDATIONS

This product may be applied at 12 fluid ounces per acre to control the weeds listed below and most other winter annual grass and broadleaf weeds in established coastal Bermudagrass pastures.

Annual bluegrass	Oats
Cheat	Ryegrass, Italian
Crabgrass	Sandbur, field
Henbit	Sunflower
Johnsongrass, seedling	Wheat
Little barley	Wild mustard

TIMING OF APPLICATION

Applications prior to spring growth: Apply this product in the late winter or early spring but before new coastal Bermudagrass growth begins in the spring. Applications to new growth can damage the Bermudagrass.

Remove domestic livestock from the pasture before making the application. Wait 60 days after making this application before grazing or harvesting the treated area.

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

Applications following the first cutting: Apply this product after the first Bermudagrass cutting when the Bermudagrass has not yet begun to regrow. Applications made after regrowth has begun can damage the Bermudagrass.

Remove domestic livestock from the pasture before making the application. Wait 28 days after making this application before grazing or harvesting the treated area.

NOTE: ONLY ONE APPLICATION PER YEAR MAY BE MADE TO ANY ONE FIELD. A SPRING APPLICATION PRIOR TO GROWTH AND AN APPLICATION FOLLOWING THE FIRST CUTTING MAY NOT BE MADE ON THE FIELD DURING THE SAME YEAR.

C. FOR DISTRIBUTION AND USE ONLY WITHIN SOUTH DAKOTA. FOR NON-SELECTIVE CONTROL OF LISTED ANNUAL WEEDS IN SMALL GRAIN CROPPING SYSTEMS

RECOMMENDATIONS

Refer to the [INSERT BRAND NAME] label for rate recommendations and weeds controlled.

For ground applications, use 3 to 5 gallons of water per acre. For aerial applications, use 2 to 3 gallons of water per acre.

ATTENTION

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation since minute quantities of this herbicide can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) that are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Adjust boom height on ground equipment to prevent streaked, overlapped or uneven applications. Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets.

In aerial applications, do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Ensure uniform application. Use appropriate marking devices when applying herbicides by air.

Avoid spraying when weeds are subject to moisture stress, when dust is on foliage, or when straw canopy covers the weeds.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residue of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF PART.

LANDING GEAR IS MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

D. TANK MIX WITH Aim® FOR IMPROVED SYMPTOMS IN PRE-PLANT APPLICATIONS IN CORN, SOYBEANS OR WHEAT

RECOMMENDATIONS

This tank-mixture will significantly enhance the speed of symptomatology appearance on certain weeds when applied as a pre-plant treatment prior to corn, Roundup Ready corn, soybeans, Roundup Ready soybeans or wheat. This mixture may be applied prior to planting or emergence of labeled crops. This mixture will not provide residual control of weeds that are un-emerged at the time of treatment.

Combine [INSERT BRAND NAME] (22 fluid ounces of product per acre) and Aim (0.144 ounce per acre) in the spray tank in 10 to 20 gallons of water per acre. For best results, make applications to actively growing weeds. Ammonium sulfate at 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons of water may be added. The addition of 2,4-D or dicamba is not recommended.

SPECIFIC MIXING RECOMMENDATIONS

Option 1

1. Fill the spray tank one-half full with water and start the agitation.
2. Add Aim at 0.144 ounce per acre and mix thoroughly.
3. If desired add ammonium sulfate at 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons of spray.
4. Add [INSERT BRAND NAME] at 22 fluid ounces per acre and finish filling the spray tank with water.

Option 2

1. Fill the spray tank one-half full with water and start the agitation.
2. If desired add ammonium sulfate at 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons of spray.
3. Add [INSERT BRAND NAME] at 22 fluid ounces per acre.
4. Prepare a slurry of Aim with water and add to the spray tank.

Read and follow the Aim label for additional application instructions and precautions.

Aim is a trademark of FMC Corporation.

E. TANK MIX WITH RESOURCE® FOR IMPROVED SYMPTOMS IN PRE-PLANT APPLICATIONS IN CORN OR SOYBEANS

RECOMMENDATIONS

This tank-mixture will significantly enhance the speed of symptomatology appearance on certain weeds when applied as a pre-plant treatment prior to corn or soybeans. This mixture may be applied prior to planting or emergence of labeled crops. This mixture will not provide residual control of weeds that are un-emerged at the time of treatment.

Combine [INSERT BRAND NAME] (22 fluid ounces of product per acre) and Resource® (2.08 fluid ounces per acre) in the spray tank in 10 to 20 gallons of water per acre. For best results, make applications to actively growing weeds. Ammonium sulfate at 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons of water may be added. The addition of 2,4-D or dicamba is not recommended.

SPECIFIC MIXING RECOMMENDATIONS

Option 1

1. Fill the spray tank one-half full with water and start the agitation.

4.5

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

2. Add Resource at 2.08 fluid ounces per acre and mix thoroughly.
3. If desired add ammonium sulfate at 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons of spray.
4. Add [INSERT BRAND NAME] at 22 fluid ounces per acre and finish filling the spray tank with water.

Option 2

1. Fill the spray tank one-half full with water and start the agitation.
2. If desired add ammonium sulfate at 1 to 2 percent by weight or 8.5 to 17 pounds per 100 gallons of spray.
3. Add [INSERT BRAND NAME] at 22 fluid ounces per acre.
4. Add Resource at 2.08 fluid ounces per acre to the spray tank.

Read and follow the Resource label for additional application instructions and precautions.

Resource is a trademark of Valent USA Corporation.

F. FOR AERIAL APPLICATION IN CALIFORNIA ONLY

Aerial applications of this product are allowed in the following situations:

1. In fallow and reduced tillage systems prior to the emergence or transplanting of labeled crops.
2. In alfalfa and pasture renovation applications.
3. Over-the-top applications in Roundup Ready corn and cotton. Refer to further label instructions for Roundup Ready corn and Roundup Ready cotton for specific application instructions for over-the-top applications in these crops.
4. Preharvest in alfalfa, corn, cotton, wheat, Roundup Ready corn and Roundup Ready cotton. Refer to [INSERT BRAND NAME] label instructions for Roundup Ready corn and Roundup Ready cotton for specific preharvest application instructions for each individual crop.

Do not plant subsequent crops other than those listed in the label booklet for 30 days following application.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

When tank mixing this product with 2,4-D for aerial applications, only 2,4-D amine formulations may be used. This tank mixture may be used for fallow and reduced tillage systems and alfalfa and pasture renovation applications only.

DO NOT EXCEED THE FOLLOWING MAXIMUM RATES WHEN MAKING APPLICATIONS BY AIR:

22 fluid ounces	44 fluid ounces
	Alfalfa
Corn	
Roundup Ready® Corn	
	Cotton
	Roundup Ready® Cotton
	Fallow
	Reduced tillage systems
	Pastures
Wheat	

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

Aerial Equipment

Use the recommended rates of this product in 3 to 15 gallons of water per acre. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters.

AVOID DRIFT—DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

1. Do not apply within 100 feet of all desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations that dispense spray as fine spray droplets. Do not angle nozzles forward into the air-stream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application—To avoid streaking, uneven, or over-lapped application, use appropriate marking devices. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR IS MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

G. FOR AERIAL APPLICATION IN FRESNO COUNTY, CALIFORNIA ONLY (From February 15 through March 31 Only)

Applicable Area

This supplement only applies to the area contained inside the following boundaries within Fresno County, California.

North: Fresno County line
South: Fresno County line
East: State Highway 99
West: Fresno County line

General Information

Always read and follow the label directions and precautionary statements for all products used in the aerial application.

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

Observe the following directions to minimize off-site movement during aerial application of this product. Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

Written Recommendations

A written recommendation **MUST** be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation **MUST** state the proximity of surrounding crops, and that conditions of each manufacturer's product label and this label have been satisfied.

Aerial Applicator Training and Equipment

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to insure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved fly-ins constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

Applications at Night—Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

To report known or suspected misuse of
this product, call 1-800-332-3111.

For additional information on the proper aerial application of this product, call 916-784-1718.

Note: For aerial application from April 1 through February 14, refer to the "FOR AERIAL APPLICATION IN CALIFORNIA ONLY" supplemental label.

H. FOR AERIAL APPLICATION IN ARKANSAS ONLY

USE DIRECTIONS

AVOID DRIFT. DO NOT APPLY INTO STILL AIR WHERE THERE IS A TEMPERATURE INVERSION LAYER LOW ENOUGH FOR FINE SPRAY PARTICLES TO BECOME SUSPENDED AND MOVE OUTSIDE THE TARGET AREA WHEN THE INVERSION LAYER MOVES. DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION THAT FAVORS DRIFT. DRIFT IS LIKELY TO CAUSE DAMAGE TO ANY VEGETATION CONTACTED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the recommended rate of this product in 3 to 15 gallons of water per acre.

Use sufficient carrier volume and appropriate equipment set-up to form droplets large enough to avoid drift potential. Coarse droplets in the 300 to 500 (VMD) micron range are recommended.

Applications should typically be made with the nozzle release point at 8 to 15 feet above the top of the target plants unless a greater height is required for aircraft safety.

The distance of the outermost nozzles on the boom must not exceed 75 percent of the length of the wingspan or rotor. In many cases, reducing this distance to 65 percent of the length of the wingspan or rotor will improve drift control without affecting the swath width.

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

Nozzles must always discharge backward parallel with the air stream and never discharge downwards more than 45 degrees on fixed wing aircraft or forward of the prevailing airflow on rotary winged aircraft. Avoid the use of nozzles with wide-angle discharge.

Do not apply this product when winds are in excess of 10 mph.

Do not apply when there is a low-level inversion where fine spray particles could be suspended in still air and move outside the target area when the inversion layer moves. These conditions may occur when wind speeds are less than 2 mph.

Use the following guidelines when applications are made near crops or other desirable vegetation:

1. Do not apply within 100 feet of any desirable vegetation or crops.
2. If wind up to 5 mph is blowing toward desirable vegetation or crops, do not apply within 500 feet upwind of the desirable vegetation or crops.
3. Winds blowing from 5 to 10 mph toward desirable vegetation or crops will likely require buffer zones in excess of 500 feet.

I. USE ONLY FOR SEED PRODUCTION OF ALFALFA WITH THE ROUNDUP READY® GENE

NOTE: THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT ALFALFA IN PRODUCTION FIELDS OF ALFALFA CONTAINING THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH OF ALFALFA WILL RESULT IF ALFALFA VARIETIES THAT DO NOT CONTAIN THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT.

USE RECOMMENDATIONS

This product will control non-glyphosate tolerant alfalfa in seed production fields of alfalfa containing the Roundup Ready gene. Apply up to 44 fluid ounces of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. Subsequent applications of up to 44 fluid ounces per acre each may be applied, if needed to control non-glyphosate tolerant alfalfa plants.

DO NOT EXCEED A MAXIMUM RATE OF 5.3 QUARTS OF THIS PRODUCT PER ACRE PER SEASON.

Application-timing—This product can be applied to Roundup Ready alfalfa from emergence to harvest.

Treated alfalfa or the resulting seed may not be used for food or feed. Do not feed or graze treated alfalfa. Do not process treated alfalfa or resulting seed for food or feed.

J. USE ONLY FOR SEED PRODUCTION OF LETTUCE WITH THE ROUNDUP READY® GENE

NOTE: THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT LETTUCE IN PRODUCTION FIELDS OF LETTUCE CONTAINING THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH OF LETTUCE WILL RESULT IF LETTUCE VARIETIES THAT DO NOT CONTAIN THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT.

USE RECOMMENDATIONS

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

This product will control non-glyphosate tolerant lettuce in seed production fields of lettuce containing the Roundup Ready gene. Apply up to 44 fluid ounces of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. A second application up to 44 fluid ounces per acre may be applied, if needed to control non-glyphosate tolerant lettuce plants.

DO NOT EXCEED A MAXIMUM RATE OF 2.5 QUARTS OF THIS PRODUCT PER ACRE PER SEASON.

Application timing—This product can be applied to Roundup Ready lettuce from emergence to harvest.

Treated lettuce may not be used for food or feed. Do not feed or graze treated lettuce. Do not process treated lettuce for food or feed.

K. USE ONLY FOR SEED PRODUCTION OF RICE WITH THE ROUNDUP READY® GENE

NOTE: THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT RICE IN PRODUCTION FIELDS OF RICE CONTAINING THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH WILL RESULT IF RICE VARIETIES THAT DO NOT CONTAIN THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT.

USE RECOMMENDATIONS

This product will control non-glyphosate tolerant rice in seed production fields of rice containing the Roundup Ready gene. Apply up to 44 fluid ounces of this product in 5 to 20 gallons of spray solution per acre as a broadcast spray. A second application up to 44 fluid ounces per acre may be applied, if needed to control non-glyphosate tolerant rice plants.

DO NOT EXCEED A MAXIMUM RATE OF 2.5 QUARTS OF THIS PRODUCT PER ACRE PER SEASON.

Application timing -- This product can be applied to Roundup Ready rice from emergence to harvest.

Treated rice may not be used for food or feed. Do not feed or graze treated rice. Do not process treated rice for food or feed.

L. FOR USE ONLY FOR SEED PRODUCTION OF WHEAT WITH THE ROUNDUP READY® GENE

NOTE: THIS PRODUCT MAY BE USED FOR CONTROL OF NON-GLYPHOSATE TOLERANT WHEAT IN PRODUCTION FIELDS OF WHEAT CONTAINING THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH WILL RESULT IF WHEAT VARIETIES THAT DO NOT CONTAIN THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT.

USE RECOMMENDATIONS

This product will control non-glyphosate tolerant wheat in seed production fields of wheat containing the Roundup Ready gene. Apply up to 22 fluid ounces of this product in 5 to 20 gallons of spray solution per acre

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

as a broadcast spray. A second application up to 22 fluid ounces per acre may be applied, if needed to control non-glyphosate tolerant wheat plants.

DO NOT EXCEED A MAXIMUM RATE OF 44 FLUID OUNCES OF THIS PRODUCT PER ACRE PER SEASON.

Application timing—This product can be applied to Roundup Ready wheat from emergence to harvest.

Treated wheat may not be used for food or feed. Do not feed or graze treated wheat. Do not process treated wheat for food or feed.

M. FOR CONTROLLING BARNYARDGRASS (*ECHINOCHLOA CRUS-GALLI*) IN RICE USING RENOVATION TREATMENTS IN CALIFORNIA ONLY

RECOMMENDATIONS

Renovation Treatment

USE INSTRUCTIONS: This product may be applied as a renovation treatment in rice crops to control barnyardgrass infestations using ground broadcast spray or hand-held equipment. Renovation is defined as herbicide treatment that will produce crop and weed destruction in an entire field or contiguous area treated within a field. Follow the application methods and recommended treatment rates in the label booklet for [INSERT BRAND NAME] herbicide.

PRECAUTIONS, RESTRICTIONS: The crop receiving spray in the treated area will be killed. Take care to avoid drift or spray outside target area for the same reason. The rice straw and stubble from the treated area, including a 25-foot buffer zone on all sides, shall not be used for grazing, animal bedding or any feed purposes.

No Aerial applications are permitted for rice renovation using this supplemental label.

N. FOR NEW COTTON LINES WITH THE ROUNDUP READY® GENE - IN-CROP APPLICATIONS

General Information

ATTENTION: MONSANTO RECOMMENDS THIS PRODUCT FOR USE ONLY OVER-THE-TOP OF OR DIRECTED ONTO IMPROVED COTTON VARIETIES THAT ARE DESIGNATED AS COTTON WITH THE ROUNDUP READY GENE. SEVERE INJURY OR DEATH OF COTTON WILL RESULT IF ANY COTTON VARIETIES NOT PROPERLY DESIGNATED AS HAVING THE ROUNDUP READY GENE ARE SPRAYED WITH THIS PRODUCT. AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, OR ANY DESIRABLE PLANTS AND TREES, OTHER THAN CROPS WITH THE ROUNDUP READY GENE, SINCE SEVERE INJURY OR DESTRUCTION WILL RESULT.

ROUNDUP READY COTTON VARIETIES MUST BE PURCHASED FROM AN AUTHORIZED LICENSED SEED SUPPLIER. THE DESIGNATION, "ROUNDUP READY", INDICATES THE COTTON VARIETY CONTAINS A PATENTED PROPRIETARY TRAIT.

Application Instructions

This product will control many troublesome weeds with over-the-top, post-directed, hooded sprayer, or preharvest applications in Roundup Ready cotton. See the APPLICATION EQUIPMENT AND TECHNIQUES section of the [INSERT BRAND NAME] label booklet for more information.

Maximum Allowable Yearly Rates

Combined total per year for all applications	5.3 quarts per acre
Preplant, Preemergence applications	3.3 quarts per acre
Total over-the-top applications from cracking to layby	56 fluid ounces per acre
Total precision post-directed or hooded applications through layby	44 fluid ounces per acre
Maximum preharvest application rate	44 fluid ounces per acre

NOTE: Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges. Apply a preplant burndown treatment of 12 to 32 fluid ounces per acre of this product.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product to Roundup Ready cotton. Follow the cleaning procedures specified on the label of the product(s) previously used. Cotton is very sensitive to many herbicides at extremely low concentrations and care should be taken to thoroughly clean all equipment prior to use.

There are no rotational crop restrictions following applications of this product.

Over-the-top applications: Up to 56 fluid ounces per sprayed acre of this product may be applied by aerial or ground broadcast application equipment postemergence to Roundup Ready cotton from the ground cracking stage until layby. The **Annual and Perennial Weeds Rate Tables** in the label booklet for [INSERT BRAND NAME] should be used to determine application rate. Any single over-the-top application should not exceed 44 fluid ounces per sprayed acre. Sequential applications of this product must be at least 7 days apart.

With ground broadcast equipment: apply this product in 5 to 20 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

For aerial applications, apply this product in 3 to 15 gallons of water per acre. **DO NOT EXCEED A MAXIMUM RATE OF 22 FLUID OUNCES PER ACRE OF THIS PRODUCT WHEN MAKING APPLICATIONS BY AIR. AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN THE ROUNDUP READY GENE.** Do not apply during low-level inversion conditions, when winds are gusty or under any other conditions that favor drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Post-directed or hooded applications: In addition to the over-the-top applications, up to 44 fluid ounces per sprayed acre may be applied as a post-directed or hooded application to Roundup Ready cotton through layby. These application methods may be preferred when there is a need to direct the spray onto weeds that are growing under the crop canopy. Equipment should be used which directs the spray into the lower crop canopy so that weeds in the row are covered. For best results, make applications while weeds are small (less than 3

II. SUPPLEMENTAL LABELING FOR FOOD CROP USES

inches). Sequential in-crop applications must be at least 7 days apart from any other in-crop application of this product.

ATTENTION: USE OF [INSERT BRAND NAME] IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN UNANTICIPATED RESULTS INCLUDING YIELD LOSS.

Weeds controlled. For specific rates of application and instructions for control of various annual and perennial weeds, refer to the "ANNUAL and PERENNIAL WEEDS RATE TABLE" sections of the label booklet. [INSERT BRAND NAME] applied at 22 to 44 fluid ounces per acre will control or suppress the growth of the following perennial weeds and reduce crop competition: yellow and purple nutsedge, rhizome johnsongrass, common Bermudagrass, silverleaf nightshade, trumpet creeper, and redvine. Fall preharvest applications may be required for control of these perennial weeds.

Tank mixtures with other herbicides may result in reduced weed control, or may cause crop injury and are not recommended for applications where the spray contacts the cotton plant.

Some weeds with multiple germination times or suppressed (stunted) weeds may require sequential applications of this product for control.

Preharvest applications: This product may be applied for preharvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton any time after layby up to 7 days prior to harvest. This product may be tank mixed with DEFTM 6, FolexTM, Ginstar, or PrepTM to enhance cotton leaf drop. Allow a minimum of 7 days between final application and harvest. No more than 44 fluid ounces of this product per acre may be applied preharvest (between layby and seven days prior to harvest). Do not apply more than 22 fluid ounces of this product per acre by air. **NOTE:** This product will not enhance the performance of harvest aids when applied to Roundup Ready cotton. Do not apply [INSERT BRAND NAME] preharvest to cotton grown for seed.

Precautions/Restrictions: The combined total application from crop emergence until harvest must not exceed 5.3 quarts per acre. Allow a minimum of 7 days between final application and harvest. Tank mixtures with other herbicides may result in reduced weed control, or may cause crop injury and are not recommended for applications where the spray contacts the cotton plant. Do not apply [INSERT BRAND NAME] preharvest to cotton grown for seed.

O. ADDITION OF SURFACTANT FOR APPLICATIONS WITH [INSERT BRAND NAME]

Although not generally required, surfactant may be added to spray solutions at water carrier volumes above 30 gallons per acre or application rates below 16 fluid ounces of this product per acre.

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, a rate of 0.25 to 0.5 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

426

DO NOT add buffering agents or pH adjusting agents to the spray solution when [INSERT BRAND NAME] is the only pesticide used. **DO NOT ADD SURFACTANT TO THIS PRODUCT FOR APPLICATIONS OVER-THE-TOP OF ROUNDUP READY CROPS AND PREHARVEST TO COTTON.**

P. ADDITION OF SURFACTANT FOR APPLICATIONS WITH [INSERT BRAND NAME] (Alternate version)

Although not generally required, surfactant may be added to this product. However, surfactant addition is recommended at water carrier volumes above 30 gallons per acre or rates below 16 fluid ounces per acre.

Nonionic surfactants which are labeled for use with herbicides may be used. Do not reduce rates of this product when adding surfactant. When adding additional surfactant, a rate of 0.25 to 0.50 percent surfactant concentration (1 to 2 quarts per 100 gallons of spray solution) when using surfactants which contain at least 70 percent active ingredient or a 1 percent surfactant concentration (4 quarts per 100 gallons of spray solution) for those surfactants containing less than 70 percent active ingredient is recommended. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

When applied as recommended under the conditions described, this product controls annual and perennial weeds listed in the label booklet.

DO NOT add buffering agents or pH adjusting agents to the spray solution when [INSERT BRAND NAME] is the only pesticide used. **DO NOT ADD SURFACTANT TO THIS PRODUCT FOR APPLICATIONS OVER-THE-TOP OF ROUNDUP READY CROPS AND PREHARVEST TO COTTON.**

III. MAIN LABEL FOR INDUSTRIAL, TURF, ORNAMENTAL USES

[INSERT BRAND NAME]

The complete broad-spectrum postemergence professional herbicide for industrial, turf and ornamental weed control.

Complete Directions for Use

EPA Reg. No. 524-LGT

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION IS LIKELY TO RESULT.

Read the entire label before using this product.

Use only according to label instructions.

Container Label Statement (5 gallons or smaller):

This container is not to be sold to homeowners for residential use.

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. This product can only be used in accordance with the Directions for Use on this label or in separately published Monsanto Supplemental Labeling.

Not all products recommended on this label are registered for use in California. Check the registration status of each product in California before using.

Read the "LIMIT OF WARRANTY AND LIABILITY" statement at the end of the label before buying or using. If terms are not acceptable, return at once unopened.

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. SEE INDIVIDUAL CONTAINER LABEL FOR REPACKAGING LIMITATIONS.

Refillable Container Label Statement

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION. IT IS INTENDED THAT REPACKAGING BE ONLY IN ACCORDANCE WITH A MONSANTO REPACKAGING OR TOLL REPACKAGING AGREEMENT.

Non-Refillable Container Label Statement:

THIS IS AN END-USE PRODUCT. MONSANTO DOES NOT INTEND AND HAS NOT REGISTERED IT FOR REFORMULATION OR REPACKAGING

CONTENTS

1 1.0 INGREDIENTS

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

- 2 2.0 IMPORTANT PHONE NUMBERS
- 3 3.0 PRECAUTIONARY STATEMENTS
 - 3.1 Hazards to Humans and Domestic Animals
 - 3.2 Environmental Hazards
 - 3.3 Physical or Chemical Hazards
- 4 4.0 STORAGE AND DISPOSAL
- 5 5.0 GENERAL INFORMATION
(How This Product Works)
- 6 6.0 MIXING
 - 6.1 Mixing with Water
 - 6.2 Tank Mixing Procedure
 - 6.3 Mixing for Hand-Held Sprayers
 - 6.4 Colorants or Dyes
- 7 7.0 APPLICATION EQUIPMENT AND TECHNIQUES
 - 7.1 Aerial Equipment
 - 7.2 Ground Broadcast Equipment
 - 7.3 Hand-Held or High-Volume Equipment
 - 7.4 Selective Equipment
 - 7.5 Injection Systems
 - 7.6 CDA Equipment
- 8 8.0 SITE AND USE RECOMMENDATIONS
 - 8.1 Cut Stumps
 - 8.2 Forestry Site Preparation
 - 8.3 General Non-crop Areas and Industrial Sites
 - 8.4 Habitat Management
 - 8.5 Injection and Frill (Woody Brush and Trees)
 - 8.6 Ornamentals, Plant Nurseries, and Christmas Trees
 - 8.7 Railroads
 - 8.8 Roadsides
 - 8.9 Utility Sites
- 9 9.0 WEEDS CONTROLLED
 - 9.1 Annual Weeds
 - 9.2 Perennial Weeds
 - 9.3 Woody Brush and Trees
- 10 10.0 LIMIT OF WARRANTY AND LIABILITY

1.0 INGREDIENTS

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt 48.8%

OTHER INGREDIENTS: 51.2%
100.0%

42

Optional alternate statement: OTHER INGREDIENTS (including 10 percent surfactant):

*Contains 660 grams per litre or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per litre or 4.5 pounds per U.S. gallon of the acid, glyphosate.

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

2.0 IMPORTANT PHONE NUMBERS

1. FOR PRODUCT INFORMATION OR ASSISTANCE IN USING THIS PRODUCT,
CALL TOLL-FREE,

1-800-332-3111.

2. IN CASE OF AN EMERGENCY INVOLVING THIS PRODUCT, OR FOR MEDICAL ASSISTANCE,
CALL COLLECT, DAY OR NIGHT.

(314)-694-4000

3.0 PRECAUTIONARY STATEMENTS

Keep out of reach of children.

CAUTION!

CAUSES MODERATE EYE IRRITATION.

HARMFUL IF INHALED.

Avoid contact with eyes, skin, or clothing. Avoid breathing vapor or spray mist.

FIRST AID: Call a poison control center or doctor for treatment advice.

IF IN EYES –	<ul style="list-style-type: none">• Hold eye open and rinse slowly and gently with water for 15 - 20 minutes.• Remove contact lenses if present after the first 5 minutes then continue rinsing eye.
IF ON SKIN	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15 - 20 minutes.
IF INHALED	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

1430

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. This product is identified as **[INSERT BRAND NAME]**, EPA Registration No. 524-LGT. You may also contact (314) 694-4000, collect day or night, for emergency medical treatment information.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes, socks, chemical resistant gloves (EPA Chemical Resistant Category A) 8 mils in thickness or greater composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Follow manufacturer's instructions for cleaning/maintaining PPE (Personal Protective Equipment). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3.2 Environmental Hazards

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

3.3 Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY

431

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls, shoes plus socks and chemical resistant gloves (EPA Chemical Resistance Category A) 8 mils in thickness or greater composed of materials such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Keep container closed to prevent spills and contamination.

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

FOR REFILLABLE PORTABLE CONTAINERS:

432

Do not reuse this container except for refill in accordance with a valid Monsanto Repackaging or Toll Repackaging Agreement. If not refilled or returned to the authorized repackaging facility, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

FOR METAL CONTAINERS (non-aerosol):

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

FOR BULK CONTAINERS:

Triple rinse emptied bulk container. Then offer for recycling or reconditioning, or dispose of in a manner approved by state and local authorities.

FOR PLASTIC 1-WAY CONTAINERS & BOTTLES:

Do not reuse container. Triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

FOR DRUMS:

Do not reuse container. Return container per the Monsanto container return program. If not returned, triple rinse container, then puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

5.0 GENERAL INFORMATION

(How This Product Works)

Product Description: This product is a postemergent, systemic herbicide with no soil residual activity. It gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid containing surfactant and no additional surfactant is needed or recommended.

Optional alternate statement: It is formulated as a water-soluble liquid containing 10 percent surfactant and no additional surfactant is needed or recommended.

Time to Symptoms: This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Mode of Action in Plants: The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

Cultural Considerations: Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfastness: Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

No Soil Activity: Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

Tank Mixing: This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this label. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

Annual Maximum Use Rate: The combined total of all treatments must not exceed 7 quarts of this product per acre per year. The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rates.

ATTENTION

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS (EXCEPT AS SPECIFIED FOR INDIVIDUAL ROUNDUP READY CROPS), DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) that are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences.

6.0 MIXING

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS VISIBLY MUDDY WATER OR WATER FROM PONDS AND DITCHES THAT IS NOT CLEAR.

6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the recommended amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-

437

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

6.2 Tank Mixing Procedure

When tank mixing, read and carefully observe label directions, cautionary statements and all information on the labels of all products used. Add the tank-mix product to the tank as directed by the label. Maintain agitation and add the recommended amount of this product.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation may be required to resuspend the mixture before spraying is resumed.

Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh.

Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "TANK MIXING" section of "GENERAL INFORMATION" for additional precautions.

6.3 Mixing for Hand-Held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

Desired Volume	Amount of [INSERT BRAND NAME]					
	0.4%	0.7%	1%	1.5%	4%	7%
1 gal	1/2 oz	1 oz	1-1/3 oz	2 oz	5 oz	9 oz
25 gal	0.8 pt	0.8 qt	1 qt	1-1/2 qt	4 qt	7 qt
100 gal	1.6 qt	3.2 qt	1 gal	1-1/2 gal	4 gal	7 gal

2 tablespoons = 1 fluid ounce

For use in backpack, knapsack or pump-up sprayers, it is suggested that the recommended amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

6.4 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilution. Use colorants or dyes according to the manufacturer's recommendations.

2.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.

SPRAY DRIFT MANAGEMENT

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

AERIAL SPRAY DRIFT MANAGEMENT

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

Importance of droplet size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see the **Wind, Temperature and Humidity**, and **Temperature Inversion** sections of this label).

Controlling droplet size

- **Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with the higher rated flows produce larger droplets.
- **Pressure:** Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles:** Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle orientation:** Orienting nozzles so that the spray is released backwards, parallel to the airstream, will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

- **Boom Length:** For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.
- **Application Height:** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces the exposure of the droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sunsets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive areas

This product should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

FOR AERIAL APPLICATION IN CALIFORNIA, REFER TO THE FEDERAL SUPPLEMENTAL LABEL FOR AERIAL APPLICATIONS IN THAT STATE FOR SPECIFIC INSTRUCTIONS, RESTRICTIONS AND REQUIREMENTS.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

This product plus, dicamba tank mixtures may not be applied by air in California.

TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Avoid direct application to any body of water.

Use the recommended rates of this herbicide in 3 to 25 gallons of water per acre.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application --To avoid streaked, uneven or overlapped application, use appropriate marking devices.

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion. To prevent corrosion of exposed parts, thoroughly wash aircraft after each day of spraying to remove residues of this product accumulated during spraying or from spills. Landing gear is most susceptible.

7.2 Ground Broadcast Equipment

Use the recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, spray volume should be increased within the recommended range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat-fan nozzles. Check for even distribution of spray droplets.

7.3 Hand-Held or High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only.

For control of weeds listed in the "ANNUAL WEEDS" section of "WEEDS CONTROLLED", apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. For annual weeds over 6 inches tall, or unless otherwise specified, use a 0.7 percent solution. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

For low volume directed spray applications, use a 4 to 7 percent solution of this product for control or partial control of annual weeds, perennial weeds, or woody brush and trees. Spray coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one half of the plant is important for best results. To ensure adequate spray coverage, spray both sides of large or tall woody brush and trees, when foliage is thick and dense, or where there are multiple sprouts.

7.4 Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars, after dilution and thorough mixing with water, to listed weeds growing in any non-crop site specified on this label.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION, AS SERIOUS INJURY OR DEATH IS LIKELY TO OCCUR.

Applicators used above desired vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam or splatter of the herbicide solution settling on desirable vegetation is likely to result in discoloration, stunting or destruction.

Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

Shielded and hooded applicators

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide. Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. **EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.**

Wiper applicators and sponge bars

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

For Rope or Sponge Wick Applicators--Solutions ranging from 25 to 50 percent of this product in water may be used.

For Panel Applicators and pressure-feed systems--Solutions ranging from 25 to 100 percent of this product in water may be used.

When applied as recommended, this product **CONTROLS** the following weeds:

Corn, volunteer	Sicklepod
Panicum, Texas	Spanishneedles
Rye, common	Starbur, bristly
Shattercane	

When applied as recommended, this product **SUPPRESSES** the following weeds:

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Beggarweed, Florida	Ragweed, common
Bermudagrass	Ragweed, giant
Dogbane, hemp	Smutgrass
Dogfennel	Sunflower
Guineagrass	Thistle, Canada
Johnsongrass	Thistle, musk
Milkweed	Vaseygrass
Nightshade, silverleaf	Velvetleaf
Pigweed, redroot	

7.5 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream. Do not mix this product with the undiluted concentrate of other products when using injection systems unless specifically recommended.

7.6 CDA Equipment

The rate of this product applied per acre by controlled droplet application (CDA) equipment must not be less than the amount recommended in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 2 to 15 gallons of water per acre.

CDA equipment produces a spray pattern that is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction is likely to result.

8.0 SITE AND USE RECOMMENDATIONS

Detailed instructions follow alphabetically, by site.

Unless otherwise specified, applications may be made to control any weeds listed in the annual, perennial and woody brush tables. Refer also to the "SELECTIVE EQUIPMENT" section.

8.1 Cut Stumps

Cut stump treatments may be made on any site listed on this label. This product will control many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, applications should be made during periods of active growth and full leaf expansion.

Alder	Saltcedar
Eucalyptus	Sweetgum
Madrone	Tan oak
Oak	Willow
Reed, giant	

DO NOT MAKE CUT STUMP APPLICATIONS WHEN THE ROOTS OF DESIRABLE WOODY BRUSH OR TREES MAY BE GRAFTED TO THE ROOTS OF THE CUT STUMP. Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

8.2 Forestry site preparation

This product is recommended for the control or partial control of woody brush, trees and herbaceous weeds in forestry. This product is also recommended for use in preparing or establishing wildlife openings within these sites and maintaining logging roads.

This product is recommended for use in site preparation prior to planting any tree species, including Christmas trees, eucalyptus, hybrid tree cultivars and silvicultural nursery sites.

APPLICATION RATES AND TIMING

APPLICATION	[INSERT BRAND NAME]	SPRAY VOLUME GAL/A
<u>BROADCAST</u>		
Aerial	1.5 to 6.5 quarts per acre	5 to 30
Ground	1.5 to 6.5 quarts per acre	10 to 60
<u>SPRAY-TO-WET</u>		
Handgun, Backpack,	0.7 to 1.5 percent by volume	spray-to-wet
<u>LOW VOLUME DIRECTED SPRAY</u>		
Handgun, Backpack,	4 to 7 percent by volume	partial coverage*

*For low volume directed spray applications, coverage should be uniform with at least 50 percent of the foliage contacted. Coverage of the top one-half of the plant is important for best results.

Use higher rates of this product within the recommended range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the recommended range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.

Use the lower rates of this product within the recommended range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence.

This product has no herbicidal or residual activity in the soil. Where repeat applications are necessary, do not exceed 7 quarts of this product per acre per year.

TANK MIXTURES

Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

NOTE: For forestry site preparation, make sure the tank-mix product is approved for use prior to planting the desired species. Observe planting interval restrictions.

Any recommended rate of this product may be used in a tank mix with the following products for forestry site preparation.

<u>PRODUCT</u>	<u>BROADCAST RATE</u>
Arsenal Applicators Concentrate	2 to 16 fluid ounces per acre
Escort™	1/2 to 3 1/2 fluid ounce per acre
Chopper™	4 to 32 fluid ounce per acre
Garlon 4	1 to 4 quarts per acre
Oust™	1 to 4 ounces per acre

<u>PRODUCT</u>	<u>SPRAY-TO-WET RATES</u>
Arsenal Applicators Concentrate	1/32 to 1/2 percent by volume

<u>PRODUCT</u>	<u>LOW VOLUME DIRECTED SPRAY RATES</u>
Arsenal Applicators Concentrate	1/8 to 1/2 percent by volume

For control of herbaceous weeds, use the lower recommended tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher recommended rates.

Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release.

8.3 General Non-crop Areas and Industrial Sites

Use in areas such as airports, Christmas tree farms, ditch banks, dry ditches, dry canals, fencerows, golf courses, industrial sites, lumber yards, manufacturing sites, office complexes, ornamental nurseries, parking areas, petroleum tank farms and pumping installations, railroads, roadsides, sod or turf seed farms, storage areas, substations, warehouse areas, other public areas, and similar industrial and non-crop sites.

General weed control, Trim-and-edge and Bare ground

This product may be used in general non-crop areas. It may be applied with any application equipment described in this label. This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product may be tank mixed with the following products. Refer to these products' labels for approved non-crop sites and application rates.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

ARSENAL™	PLATEAU™
CLARITY	PRINCEP™DF
BARRICADE™ 65WG	PRINCEP™ LIQUID
DIURON	RONSTAR™ 50WP
ENDURANCE™	SAHARA™
ESCORT™	SIMAZINE
GARLON™ 3A	SURFLAN™
GARLON 4	TELAR™
KARMEX™ DF	VANQUISH™
KROVAR™ I DF	2,4-D
MANAGE®	
OUST	
PENDULUM™ 3.3 EC	
PENDULUM WDG	

This product plus dicamba tank mixtures may not be applied by air in California.

When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control or partial control of emerged perennial weeds, woody brush and trees.

For control or partial control of the following perennial weeds, apply 22 to 44 fluid ounces of this product plus 2 to 4 ounces of Oust per acre.

Bahiagrass	Johnsongrass
Bermudagrass	Poorjoe
Broomsedge	Quackgrass
Dallisgrass	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	
Fescue, tall	

Chemical mowing - Perennials

This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 4 fluid ounces of this product per acre when treating tall fescue, fine fescue, orchardgrass, quackgrass or reed canarygrass covers. Use 4 fluid ounces of this product per acre when treating Kentucky bluegrass. Apply treatments in 10 to 40 gallons of spray solution per acre.

Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

Chemical mowing - Annuals

For growth suppression of some annual grasses, such as annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 3 to 4 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Applications should be made when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments may cause injury to the desired grasses.

~~Bromus~~ species and Medusahead in Pastures and Rangelands

Bromus species. This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 6 to 12 fluid ounces of this product per acre on a broadcast basis.

443

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

For best results, treatment should coincide with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses can become reestablished on the site.

Medusahead. To treat medusahead, apply 12 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4-leaf stage. Applications may be made in the fall or spring.

Applications to brome and medusahead may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2 to 10 gallons of water per acre. For applications using ground equipment, apply in 10 to 20 gallons of water per acre. When applied as directed in this label, there are no grazing restrictions.

Dormant turfgrass

This product may be used to control or suppress many winter annual weeds and tall fescue for effective release of dormant Bermudagrass and bahiagrass turf. Treat only when turf is dormant and prior to spring greenup.

Apply 6 to 44 fluid ounces of this product per acre. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where Bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

Treatments in excess of 12 fluid ounces per acre may result in injury or delayed greenup in highly maintained areas, such as golf courses and lawns. DO NOT apply tank mixtures of this product plus Oust in highly maintained turfgrass areas. For further uses, refer to the "ROADSIDES" section of this label, which gives rates for dormant Bermudagrass and bahiagrass treatments.

Actively growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. DO NOT apply more than 12 fluid ounces of this product per acre in highly maintained turfgrass areas. DO NOT apply tank mixtures of this product plus Oust in highly maintained turfgrass areas. For further uses, refer to the "ROADSIDES" section of this label, which gives rates for actively growing Bermudagrass treatments. Use only in areas where some temporary injury or discoloration can be tolerated.

Turfgrass renovation, seed, or sod production

This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.

Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing should be delayed for 7 days after application to allow translocation into underground plant parts.

Desirable turfgrasses may be planted following the above procedures.

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.

Do not feed or graze turfgrass grown for seed or sod production for 8 weeks following application.

8.4 Habitat Management

Habitat restoration and management

This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas, including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad-spectrum vegetation control requirements. Spot treatments can be made to selectively remove unwanted plants for habitat management and enhancement.

Wildlife food plots

This product may be used as a site preparation treatment prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area. If tillage is needed to prepare a seedbed, wait 7 days after application before tillage to allow translocation into underground plant parts.

8.5 Injection and Frill (Woody Brush and Trees)

This product may be used to control woody brush and trees by injection or frill applications. Apply this product using suitable equipment that must penetrate into the living tissue. Apply the equivalent of 1/25 fluid ounce (1 mL) of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely. In species such as this, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent concentration of this product. For best results, application should be made during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below:

<u>Control</u>	<u>Partial Control</u>
Oak	Black gum
Poplar	Dogwood
Sweetgum	Hickory
Sycamore	Maple, red

8.6 Ornamentals, Plant Nurseries, and Christmas Trees

Post-directed, Trim-and-edge

This product may be used as a post-directed spray around established woody ornamental species such as arbutus, azalea, boxwood, crabapple, eucalyptus, euonymus, fir, Douglas fir, jojoba, hollies, lilac, magnolia, maple, oak, poplar, privet, pine, spruce and yew. This product may also be used to trim and edge around trees, buildings, sidewalks and roads, potted plants and other objects in a nursery setting.

Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material. THIS PRODUCT IS NOT RECOMMENDED FOR USE AS AN OVER-THE-

445

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

TOP BROADCAST SPRAY IN ORNAMENTALS AND CHRISTMAS TREES. Care must be exercised to avoid contact of spray, drift or mist with foliage or green bark of established ornamental species.

Site preparation

This product may be used prior to planting any ornamental, nursery or Christmas tree species.

Wipers

This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established eucalyptus or poplar trees. See the "SELECTIVE EQUIPMENT" section of this label for further information about the proper use of wiper applicators.

Greenhouse/Shadehouse

This product may be used to control weeds growing in and around greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off. Do not use in residential greenhouses.

8.7 Railroads

All of the instructions in the "GENERAL NON-CROP AREAS AND INDUSTRIAL SITES" section apply to railroads.

Bare ground, Ballast and Shoulders, Crossings, and Spot Treatment

This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used. This product may be tank mixed with the following products for ballast, shoulder, spot, bare ground and crossing treatments:

ARSENAL	KROVAR 1 DF
CLARITY	OUST
DIURON	SAHARA
ESCORT	SPIKE™
GARLON 3A	TELAR
GARLON 4	VANQUISH
HYVAR™ X	2,4-D

Brush control

This product may be used to control woody brush and trees on railroad rights-of-way. Apply 2.5 to 7 quarts of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80 gallons of spray solution per acre may be used. Apply a 0.7 to 1.5 percent solution of this product when using high-volume spray-to-wet applications. Apply a 4 to 7 percent solution of this product when using low volume directed sprays for spot treatment. This product may be mixed with the following products for enhanced control of woody brush and trees:

ARSENAL	GARLON 4
ESCORT	TORDON™ K

GARLON 3A

Bermudagrass release

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 12 to 32 fluid ounces of this product in up to 80 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpet creeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust. If tank-mixed, use no more than 12 to 32 fluid ounces of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Blackberry	Johnsongrass
Bluestem, silver	Poorjoe
Broomsedge	Raspberry
Dallisgrass	Trumpet creeper
Dewberry	Vaseygrass
Dock, curly	Vervain, blue
Dogfennel	

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications in the same season are not recommended, since severe injury may occur.

8.8 Roadsides

All of the instructions in the "GENERAL NON-CROP AREAS AND INDUSTRIAL SITES" section apply to roadsides.

Shoulder treatments

This product may be used on road shoulders. It may be applied with boom sprayers, shielded boom sprayers, high-volume off-center nozzles, hand-held equipment, and similar equipment.

Guardrails and other obstacles to mowing

This product may be used to control weeds growing under guardrails and around signposts and other objects along the roadside.

Spot treatment

This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.

Tank mixtures

447

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

This product may be tank-mixed with the following products for shoulder, guardrail, spot and bare ground treatments:

CLARITY	PRINCEP LIQUID
DIURON	RONSTAR 50WP
ENDURANCE	SAHARA
ESCORT	SIMAZINE
KROVAR 1 DF	SURFLAN
OUST	TELAR
PENDULUM 3.3 EC	VANQUISH
PENDULUM WDG	2,4-D
PRINCEP DF	

See the "GENERAL NON-CROP AREAS AND INDUSTRIAL SITES" section of this label for general instructions for tank mixing.

Release of Bermudagrass or Bahiagrass

Dormant applications

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant Bermudagrass or bahiagrass. Treat only when turf is dormant and prior to spring greenup. This product may also be tank-mixed with Oust for residual control. Tank mixtures of this product with Oust may delay greenup.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4- to 6-leaf stage.

Apply 6 to 44 fluid ounces of this product per acre alone or in a tank mixture with 1/4 to 1 ounce per acre of Oust. Apply the recommended rates in 10 to 40 gallons of water per acre. Use only in areas where Bermudagrass or bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated. To avoid delays in green up and minimize injury, add no more than 1 ounce of Oust per acre on Bermudagrass and no more than 1/2 ounce of Oust per acre on bahiagrass and avoid treatments when these grasses are in a semi-dormant condition.

Actively growing Bermudagrass

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 12 to 32 fluid ounces of this product in 10 to 40 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Johnsongrass
Bluestem, silver	Trumpet creeper
Fescue, tall	Vaseygrass

This product may be tank-mixed with Oust. If tank-mixed, use no more than 12 to 22 fluid ounces of this product with 1 to 2 ounces of Oust per acre. Use the lower rates of each product to control annual weeds less than 6 inches in height (or runner length) that are listed in this label and the Oust label. Use the higher rates as annual weeds increase in size and approach the flower or seedhead stages. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Fescue, tall
Bluestem, silver	Johnsongrass

418
10-10-02

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Broomsedge	Poorjoe
Dallisgrass	Trumpet creeper
Dock, curly	Vaseygrass
Dogfennel	Vervain, blue

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions. Repeat applications of the tank mix in the same season are not recommended, since severe injury may occur.

Actively growing bahiagrass

For suppression of vegetative growth and seedhead inhibition of bahiagrass for approximately 45 days, apply 4 fluid ounces of this product in 10 to 40 gallons of water per acre. Apply 1 to 2 weeks after full green up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3 fluid ounces of this product per acre, followed by an application of 2 to 3 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus Oust may be used. Apply 4 fluid ounces of this product plus 1/4 ounce of Oust per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

8.11 Utility sites

In utilities, this product is recommended for use along electrical power, pipeline and telephone rights-of-way, and in other sites associated with these rights-of-way, such as substations, roadsides, railroads or similar rights-of-way that run in conjunction with utilities.

This product is also recommended for use in preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.

Tank Mixtures

Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds; woody brush and trees. When tank mixing, read and carefully observe the label claims, cautionary statements and all information on the labels of all products used. Use according to the most restrictive precautionary statements for each product in the mixture. Any recommended rate of this product may be used in a tank mix.

For control of herbaceous weeds, use the lower recommended tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher recommended rates.

NOTE: For side trimming treatments, it is recommended that this product be used alone or in tank mixture with Garlon 4.

PRODUCT	BROADCAST RATE	USE SITES
Arsenal 2WSL	6 to 32 fluid ounces per acre	Utility Sites
Escort	1 to 2 ounces per acre	Utility Sites
Garlon 3A*, Garlon 4	1 to 4 quarts per acre	Utility Sites/ Side Trimming
Oust	1 to 4 ounces per acre	Utility Sites

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

PRODUCT	SPRAY-TO-WET RATES	USE SITES
Arsenal 2WSL	1/16 to 1/8 percent by volume	Utility Sites
Escort	1 to 2 ounces per acre	Utility Sites

PRODUCT	LOW VOLUME DIRECTED SPRAY RATES	USE SITES
Arsenal 2 WSL	1/8 to 1/2 percent by volume	Utility Sites
Escort	1 to 2 ounces per acre	Utility Sites

* Ensure that Garlon 3A is thoroughly mixed with water according to label directions before adding this product. Have spray mixture agitating at the time this product is added to avoid spray compatibility problems.

Bare Ground and Trim-and-edge

This product may be used in utility sites and substations for bare ground, trim-and-edge around objects, spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.

Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.

This product may be tank mixed with the following products. Refer to these products' labels for approved noncrop sites and application rates.

ARSENAL	PLATEAU™
BANVEL	PRINCEP™DF
BARRICADE™ 65WG	PRINCEP™ LIQUID
DIURON	RONSTAR™ 50WP
ENDURANCE™	SAHARA™
ESCORT	SIMAZINE
GARLON 3A	SURFLAN™

9.0 WEEDS CONTROLLED

Always use the higher rate of this product per acre within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (noncultivated) area.

Reduced results may occur when treating weeds heavily covered with dust. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

Refer to the following label sections for recommended rates for the control of annual and perennial weeds and woody brush and trees. For difficult to control perennial weeds and woody brush and trees, where plants are

450

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

growing under stressed conditions, or where infestations are dense, this product may be used at 4 to 7 quarts per acre for enhanced results.

9.1 Annual Weeds

Use 22 fluid ounces per acre if weeds are less than 6 inches in height or runner length and 32 to 86 fluid ounces per acre if weeds are over 6 inches in height or runner length or when weeds are growing under stressed conditions.

For spray-to-wet applications, apply a 0.4 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or for smaller weeds growing under stressed conditions, use a 0.7 to 1.5 percent solution. Use the higher rate for tough-to-control species or for weeds over 24 inches tall.

WEED SPECIES

Annoda, spurred
Barley*
Barnyardgrass*
Bittercress*
Black nightshade*
Bluegrass, annual*
Bluegrass, bulbous*
Bassia, fivehook
Brome, downy*
Brome, Japanese*
Browntop panicum*
Buttercup*
Carolina foxtail*
Carolina geranium
Castor bean
Cheatgrass*
Cheeseweed (*Malva parviflora*)
Chervil*
Chickweed*
Cocklebur*
Copperleaf, hophornbeam
Corn*
Corn speedwell*
Crabgrass*
Dwarf dandelion*
Eastern manna grass*
Eclipta*
Fall panicum*
Falsedandelion*
Falseflax, smallseed*
Fiddleneck
Field pennycress*
Filaree
Fleabane, annual*
Fleabane, hairy (*Conyza bonariensis*)*
Fleabane, rough*
Florida pusley
Foxtail*
Goatgrass, jointed*

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Goosegrass
Grain sorghum (milo)*
Groundsel, common*
Hemp sesbania
Henbit
Horseweed/Marestail (*Conyza canadensis*)
Itchgrass*
Johnsongrass, seedling
Junglerice
Knotweed
Kochia
Lamb's-quarters*
Little barley*
London rocket*
Mayweed
Medusahead*
Morningglory (*Ipomoea spp*)
Mustard, blue*
Mustard, tansy*
Mustard, tumble*
Mustard, wild*
Oats
Pigweed*
Plains/Tickseed coreopsis*
Prickly lettuce*
Puncturevine
Purslane, common
Ragweed, common*
Ragweed, giant
Red rice
Russian thistle
Rye*
Ryegrass*
Sandbur, field*
Shattercane*
Shepherd's-purse*
Sicklepod
Signalgrass, broadleaf*
Smartweed, ladythumb*
Smartweed, Pennsylvania*
Sowthistle, annual
Spanishneedles
Speedwell, purslane*
Sprangletop*
Spurge, annual
Spurge, prostrate*
Spurge, spotted*
Spurry, umbrella*
Starthistle, yellow
Sunkgrass*
Sunflower*
Teaweed/ Prickly sida
Texas panicum*
Velvetleaf
Virginia copperleaf

452

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Virginia pepperweed*
Wheat*
Wild oats*
Witchgrass*
Woolly cupgrass*
Yellow rocket

*When using field broadcast equipment (aerial applications or boom sprayers using flat-fan nozzles) these species will be controlled or partially controlled using 12 fluid ounces of this product per acre. Applications must be made using 3 to 10 gallons of carrier volume per acre. Use nozzles that ensure thorough coverage of foliage and treat when weeds are in an early growth stage.

9.2 Perennial Weeds

Best results are obtained when perennial weeds are treated after they reach the reproductive stage of growth (seedhead initiation in grasses and bud formation in broadleaves). For non-flowering plants, best results are obtained when the plants reach a mature stage of growth. In many situations, treatments are required prior to these growth stages. Under these conditions, use the higher application rate within the recommended range.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low volume directed spot treatments, apply a 4 to 7 percent solution of this product.

Allow 7 or more days after application before tillage.

Weed Species	Rate (QT/A)	Hand-Held % Solution
Alfalfa*	0.7	1.5
Alligatorweed*	2.5	1
Anise (fennel)	1.5 - 2.5	1 - 1.5
Bahiagrass	2 - 3.3	1.5
Beachgrass, European (<i>Ammophila arenaria</i>)	-	3.5
Bentgrass*	1	1.5
Bermudagrass	3.3	1.5
Bermudagrass, water (knotgrass)	1	1.5
Bindweed, field	2.5 - 3.3	1.5
Bluegrass, Kentucky	1.5	1.5
Blueweed, Texas	2.5 - 3.3	1.5
Brackenfern	2 - 2.5	1
Bromegrass, smooth	1.5	1.5
Bursage, woolly-leaf	--	1.5
Canarygrass, reed	1.5 - 2	1.5
Cattail	2 - 3.3	1.5
Clover, red, white	2 - 3.3	1.5
Cogongrass	2 - 3.3	1.5
Dallisgrass	2 - 3.3	1.5
Dandelion	2 - 3.3	1.5
Dock, curly	2 - 3.3	1.5
Dogbane, hemp	2.5	1.5
Fescue (except tall)	2 - 3.3	1.5
Fescue, tall	1 - 2	1.5
German ivy	1.5 - 2.5	1 - 1.5
Guineagrass	2	1

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Horsenettle	2 - 3.3	1.5
Horseradish	2.5	1.5
Iceplant	1.5	1.5 - 2
Jerusalem artichoke	2 - 3.3	1.5
Johnsongrass	1.5 - 2	1
Kikuyugrass	1.5 - 2	1.5
Knapweed	2.5	1.5
Lantana	--	1
Lespedeza	2 - 3.3	1.5
Milkweed, common	2	1.5
Muhly, wirestem	1.5	1.5
Mullein, common	2 - 3.3	1.5
Napiergrass	2 - 3.3	1.5
Nightshade, silverleaf	1.5	1.5
Nutsedge, purple, yellow	2	1 - 1.5
Orchardgrass	1.5	1.5
Pampasgrass	2 - 3.3	1 - 1.5
Paragrass	2 - 3.3	1.5
Pepperweed, perennial	2.5	1.5
Phragmites*	2 - 3.3	1 - 1.5
Poison hemlock	1.5 - 2.5	1 - 1.5
Quackgrass	1.5 - 2	1.5
Redvine*	1.5	1.5
Reed, giant	2.5 - 3.3	1.5
Ryegrass, perennial	1.5 - 2	1
Smartweed, swamp	2 - 3.3	1.5
Spurge, leafy*	--	1.5
Sweet potato, wild*	--	1.5
Thistle, artichoke	1.5 - 2	1 - 1.5
Thistle, Canada	1.5 - 2	1.5
Timothy	1.5 - 2	1.5
Torpedograss*	2.5 - 3.3	1.5
Trumpet creeper*	1.5 - 2	1.5
Vaseygrass	2 - 3.3	1.5
Velvetgrass	2 - 3.3	1.5
Wheatgrass, western	1.5 - 2	1.5

*Partial control

9.3 Woody Brush and Trees

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using spray-to-wet treatments using hand-held equipment. When using hand-held equipment for low volume directed-spray spot treatments, apply a 4 to 7 percent solution of this product.

Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous

4.1

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

Weed Species	Broadcast Rate (QT/A)	Hand-Held Spray-to-Wet % Solution
Alder	2 - 2.5	1
Ash*	1.5 - 3.3	1 - 1.5
Aspen, quaking	1.5 - 2	1
Bearclover (Bearmat)*	1.5 - 3.3	1 - 1.5
Beech*	1.5 - 3.3	1 - 1.5
Birch	1.5	1
Blackberry	2 - 2.5	1
Blackgum	1.5 - 3.3	1 - 1.5
Bracken	1.5 - 3.3	1 - 1.5
Broom; French, Scotch	1.5 - 3.3	1 - 1.5
Buckwheat, California*	1.5 - 2.5	1 - 1.5
Cascara*	1.5 - 3.3	1 - 1.5
Catsclaw*	--	1
Ceanothus*	1.5 - 3.3	1 - 1.5
Chamise*	1.5 - 3.3	1
Cherry; bitter, black, pin	1.5 - 2	1
Coyote brush	2 - 2.5	1 - 1.5
Deerweed	1.5 - 3.3	1
Dogwood*	1.5 - 3.3	1 - 1.5
Elderberry	1.5	1
Elm*	1.5 - 3.3	1 - 1.5
Eucalyptus	--	1.5
Gorse*	1.5 - 3.3	1 - 1.5
Hasardia*	1.5 - 2.5	1 - 1.5
Hawthorn	1.5 - 2	1
Hazel	1.5	1
Hickory*	1.5 - 3.3	1 - 1.5
Honeysuckle	2 - 2.5	1
Hornbeam, American*	1.5 - 3.3	1 - 1.5
Kudzu	2.5	1.5
Locust, black*	1.5 - 2.5	1 - 1.5
Madrone resprouts*	--	1.5
Manzanita*	1.5 - 3.3	1 - 1.5
Maple, red	1.5 - 2.5	1
Maple, sugar	--	1
Monkey flower*	1.5 - 2.5	1 - 1.5
Oak; black, white*	1.5 - 2.5	1 - 1.5
Oak, post	2 - 2.5	1
Oak; northern, pin	1.5 - 2.5	1
Oak, Scrub*	1.5 - 2.5	1
Oak; southern red	1.5 - 2	1
Peppertree, Brazilian (Florida holly)*	1.5 - 3.3	1 - 1.5
Persimmon*	1.5 - 3.3	1 - 1.5
Pine	1.5 - 3.3	1 - 1.5
Poison ivy	2.5 - 3.3	1.5

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

Poison oak	2.5 - 3.3	1.5
Poplar, yellow*	1.5 - 3.3	1 - 1.5
Redbud, eastern	1.5 - 3.3	1 - 1.5
Rose, multiflora	1.5	1
Russian olive*	1.5 - 3.3	1 - 1.5
Sage, black	1.5 - 2.5	1
Sage, white*	1.5 - 2.5	1 - 1.5
Sage brush, California	1.5 - 2.5	1
Salmonberry	1.5	1
Saltcedar*	1.5 - 3.3	1 - 1.5
Sassafras*	1.5 - 3.3	1 - 1.5
Sourwood*	1.5 - 3.3	1 - 1.5
Sumac, laurel, poison, smooth, sugarbush, winged*	1.5 - 2.5	1 - 1.5
Sweetgum	1.5 - 2	1
Swordfern*	1.5 - 3.3	1 - 1.5
Tallowtree, Chinese	--	1
Tan oak sprouts*	--	1.5
Thimbleberry	1.5	1
Tobacco, tree*	1.5 - 2.5	1 - 1.5
Toyon*	-	1.5
Trumpet creeper	1.5 - 2	1
Vine maple*	1.5 - 3.3	1 - 1.5
Virginia creeper	1.5 - 3.3	1 - 1.5
Waxmyrtle, southern*	1.5 - 3.3	1 - 1.5
Willow	2	1
Yerbasanta*	-	1.5

*Partial control

10.0 LIMIT OF WARRANTY AND LIABILITY

Monsanto Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ("Directions") when used in accordance with those Directions under the conditions described therein. **NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE.** This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, application to or contact with desirable vegetation, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

This Company does not warrant any product reformulated or repackaged from this product except in accordance with this Company's stewardship requirements and with express written permission from this Company.

156

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

[INSERT BRAND NAME], Manage, Monsanto and Vine symbol are trademarks of Monsanto Technology LLC.

Escort, Hyvar, Karmex, Krovar, Oust, and Telar are trademarks of E.I. duPont de Nemours & Co. Inc.

Garlon, Spike, Surflan and Tordon are trademarks of Dow AgroSciences

Barricade, Endurance, Princep and Vanquish are trademarks of Sygenta Group

Ronstar is a trademark of Aventis Group.

Arsenal, Pendulum, Plateau, and Sahara are trademarks of BASF Corporation

III. MAIN LABEL FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

This product is protected by U.S. Patent Nos. 5,683,958; 5,703,015; 6,063,733; 6,121,199; 6,121,200. No license granted under any non-U.S. patent(s).

EPA Reg. No. 524-LGT

In case of an emergency involving this product,
or for medical assistance,
Call Collect, day or night, (314) 694-4000.

©[DATE] MONSANTO COMPANY
ST. LOUIS, MISSOURI, 63167 U.S.A.

IV. SUPPLEMENTAL LABELING FOR INDUSTRIAL, TURF, & ORNAMENTAL USES

Table of Contents: Industrial, Turf, and Ornamental Supplemental labeling

	Name	Approval Date*
A	FOR USE FOR SELECTIVE WEED CONTROL ON [INSERT BRAND NAME] TOLERANT PURE GOLD® TALL FESCUE AND AURORA GOLD® FINE FESCUE SELECTIONS.	29-Sep-1999
B	[INSERT BRAND NAME] HERBICIDE AND TANK MIXTURES FOR NON-CROP AREAS, INCLUDING RAILROAD RIGHTS-OF-WAY, SUBSTATIONS, AIRPORTS, INDUSTRIAL PLANTS, ROADSIDES, STORAGE AREAS AND SIMILAR SITES	1-Apr-1996
C	AERIAL APPLICATIONS IN CALIFORNIA	1-Apr-1996

* Original approval of these uses with Roundup Pro herbicide.

SUPPLEMENTAL LABELING

READ THE ENTIRE LABEL FOR [INSERT BRAND NAME] BEFORE PROCEEDING WITH THE USE DIRECTIONS CONTAINED IN THIS SUPPLEMENTAL LABELING.

When using [INSERT BRAND NAME] as permitted according to this supplemental labeling, read and follow all applicable directions, restrictions, and precautions on the label booklet provided with the pesticide container and on this supplemental labeling. This supplemental labeling must be in the possession of the user at the time of pesticide application.

[INSERT BRAND NAME HERE]

Herbicide

EPA Reg. No. 524-LGT

Keep out of reach of children.

CAUTION!

In case of an emergency involving this product, Call Collect, day or night, 314-694-4000.

[INSERT BRAND NAME] is a trademark of Monsanto Technology LLC.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.

This labeling must be in the possession of the user at the time of herbicide application.

AVOID CONTACT OF HERBICIDE WITH FOLIAGE, GREEN STEMS, EXPOSED NON-WOODY ROOTS OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, BECAUSE SEVERE INJURY OR DESTRUCTION MAY RESULT.

See "GENERAL INFORMATION" and "MIXING" sections of the label booklet for [INSERT BRAND NAME] for essential product performance information.

Read the "Limit of Warranty and Liability" in the label booklet for [INSERT BRAND NAME] before using. These terms apply to this supplemental labeling and if these terms are not acceptable, return the product unopened at once.

©[DATE] MONSANTO COMPANY
ST. LOUIS, MISSOURI 63167

A. FOR USE FOR SELECTIVE WEED CONTROL ON [INSERT BRAND NAME] TOLERANT PURE GOLD® TALL FESCUE AND AURORA GOLD® FINE FESCUE SELECTIONS.

[INSERT BRAND NAME] Tolerant Tall Fescue Selections For Seed Production

Use this product on [INSERT BRAND NAME] tolerant tall and fine fescue grown for seed production only.

This product may be applied at rates of 3 to 12 fluid ounces per acre as a postemergence spray on [INSERT BRAND NAME] tolerant tall fescue selections. See the label booklet for application instructions, rate recommendations, weeds controlled and proper growth stage of weeds.

When applied postemergence, this product will control or suppress the following weeds: annual bluegrass, mustards, downy brome, cheatgrass, chickweed, pennycress, fleabane, shepherd's-purse, sowistle, wild oat, dandelion, quackgrass, and Canada thistle. See the [INSERT BRAND NAME] label booklet for a complete list of weeds controlled or suppressed.

NOTE: The recommended rate for this use will limit the level of control of certain species of weeds.

NOTE: Some crop discoloration and yellowing may occur at higher rates of application with [INSERT BRAND NAME] tolerant tall and fine fescue selections. Reduction in stand of these selections may occur under stress conditions.

Timing Of Applications

Applications can be made 6 weeks after germination and to established crops after growth resumes in the Fall until onset of dormancy and in the Spring after dormancy break until 60 days prior to harvest.

Avoid spraying during or within two weeks after periods when air temperatures fall below 25°F.

Remove domestic livestock from the seed production field prior to application. Wait 60 days after making this application before grazing or harvesting the treated area.

NOTE: Only two applications per crop growth cycle may be made to any one site. If two applications are required, only one Fall and one Spring application may be made during one 12 month cycle.

B. [INSERT BRAND NAME] HERBICIDE AND TANK MIXTURES FOR NON-CROP AREAS, INCLUDING RAILROAD RIGHTS-OF-WAY, SUBSTATIONS, AIRPORTS, INDUSTRIAL PLANTS, ROADSIDES, STORAGE AREAS AND SIMILAR SITES

Do not allow spray mixtures of this herbicide to mist, drip, drift or splash onto desirable vegetation since injury or destruction may occur. Do not apply when wind or other conditions favor drift.

See the "WEEDS CONTROLLED" section of the [INSERT BRAND NAME] label booklet for rate recommendations. For difficult to control species, where dense stands occur, or where conditions for control are not ideal, 4 to 7 quarts per acre of this product may be used for improved results.

TANK MIXTURES

This product provides control of the emerged weeds listed in the label booklet. When applied as a tank mixture, the following herbicides will provide preemergence and/or postemergence control of the weeds listed in the individual product labels.

The following list of products may be tank mixed with this product. Any recommended rate of this product may be used in a tank mixture with these products.

<u>Tank-mix Product</u>	<u>Rate per Acre</u>
Arsenal TM *	0.5 to 4 pints
Banvel	1 to 4 pints
2,4-D	0.5 to 1 pound
Garlon TM 3A	1 to 6 pints
Garlon 4	1 to 6 pints
Diuron	4 to 8 pounds
Diuron + 2,4-D	4 to 8 pounds + 0.5 to 1 pound
Diuron + Garlon 3A	4 to 10 pounds + 1 to 2 pints
Diuron + Garlon 4	4 to 10 pounds + 1 to 2 pints
Hyvar TM X	4 to 8 pounds
Hyvar X + 2,4-D	4 to 8 pounds + 0.5 to 1 pound
Hyvar X + Garlon 3A	4 to 8 pounds + 1 to 2 pints
Hyvar X + Garlon 4	4 to 8 pounds + 1 to 2 pints
Krovar TM I DF	4 to 6 pounds
Krovar I DF + 2,4-D	4 to 6 pounds + 0.5 to 1 pound
Krovar I DF + Garlon 3A	4 to 6 pounds + 1 to 2 pints
Krovar I DF + Garlon 4	4 to 6 pounds + 1 to 2 pints
Oust TM	2 to 6 ounces
Oust + 2,4-D	2 to 6 ounces + 0.5 to 1 pound
Oust + Garlon 3A	2 to 6 ounces + 1 to 2 pints
Oust + Garlon 4	2 to 6 ounces + 1 to 2 pints
Spike TM 80W	2 to 5 pounds
Spike 80W + 2,4-D	2 to 5 pounds + 0.5 to 1 pound
Spike 80W + Garlon 3A	2 to 5 pounds + 1 to 2 pints
Spike 80W + Garlon 4	2 to 5 pounds + 1 to 2 pints

*Arsenal is not approved for use in the state of California.

Refer to the individual product labels for specific non-crop sites, rates, carrier volumes and precautionary statements.

Read and carefully observe the label claims, cautionary statements, recommended use rates and all other information on the labels of all products used in these tank mixtures. Use according to the most restrictive label directions for each product in the mixture.

Maintain good agitation at all times during the mixing process. Ensure that the tank-mix products are well mixed with the spray solution before adding this product.

Mix only the quantity of spray solution that can be used during the same day. Tank mixtures allowed to stand overnight may result in reduced weed control.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

IV. SUPPLEMENTAL LABELING FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

When used in combination as recommended by Monsanto Company, the liability of Monsanto shall in no manner extend to any damage, loss or injury not solely and directly caused by the inclusion of the Monsanto product in such combination use.

Read "LIMIT OF WARRANTY AND LIABILITY" in the label booklet for [INSERT BRAND NAME] before using this product. Those terms apply to this supplemental labeling and, if those terms are not acceptable, return the product unopened at once.

TMArsenal is a trademark of American Cyanamid Company.

TMBanvel is a trademark of Sandoz Crop Protection Corporation.

TMGarlon and Spike are trademarks of Dow AgroSciences LLC

TMHyvar, Krovar and Oust are trademarks of E. I duPont de Nemours and Company.

C. AERIAL APPLICATIONS IN CALIFORNIA

Aerial applications of this product are allowed in the following situations:

1. Prior to the emergence or transplanting of labeled crops
2. Aid to burning for establishment and maintenance of fuel breaks
3. Establishing fire perimeters and black lines
4. Aid to prescribed burning
5. Along fire roads
6. Range conversion
7. Habitat restoration and management
8. Wildlife food plots

Apply 22 fluid ounces to 3.3 quarts of this product in 5 to 15 gallons of water per acre using aerial (helicopter only) applications.

To broaden the spectrum of control, GarlonTM 4 may be tank mixed with this product at the rate of 0.5 to 2 quarts per acre. The rate of Garlon should not exceed 1/2 the rate of this product (e.g. 1 quart of Garlon to 2 quarts of this product) for best results.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

AVOID DRIFT - DO NOT APPLY WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH WILL ALLOW DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Use the following guidelines when aerial applications are made near crops or desirable perennial vegetation after bud break and before total leaf drop, and/or near other desirable vegetation or annual crops.

IV. SUPPLEMENTAL LABELING FOR INDUSTRIAL, TURF, AND ORNAMENTAL USES

1. Do not apply within 100 feet of any desirable vegetation or crop(s).
2. If wind up to 5 miles per hour is blowing toward desirable vegetation or crop(s), do not apply within a minimum of 500 feet of the desirable vegetation or crop(s).
3. Winds blowing from 5 to 10 miles per hour toward desirable vegetation or crop(s) may require buffer zones in excess of 500 feet.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist.
5. **APPLY BY AIR ONLY TO NONRESIDENTIAL AREAS.**

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application - To avoid streaking, uneven, or overlapped application, use appropriate marking devices.

PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion. To prevent corrosion of exposed parts, thoroughly wash aircraft after each day of spraying to remove residues of this product accumulated during spraying or from spills. Landing gear are most susceptible.

Read the "LIMIT OF WARRANTY AND LIABILITY" in the label booklet for [INSERT BRAND NAME] before using this product. Those terms apply to this supplemental labeling and if those terms are not acceptable, return the product unopened at once.

Garlon™ is a trademark of Dow AgroSciences LLC

1. IS A PUBLIC INFORMATION NECESSARY?		2. PETITION NO.		3. RECEIVED BY YEAR	
<input type="checkbox"/> YES	<input type="checkbox"/> NO			CO	NO
4. METHOD OF SUPPORT		5. PRODUCT MANAGER		6. PROJECTED RETURN	
<input type="checkbox"/> 1A	<input type="checkbox"/> 1B	<input type="checkbox"/> 1C		NO	NO
7. DATE FILED		8. DATE FILED 3-80		9. ACTION TYPE	
4/9/02	AWP			Revised Label CSF As requested 171	
10. REVIEW TYPE		11. REVIEWER CODE (Initials)		12. DATE REVIEW COMPLETED	
NO	YES	NO	YES	NO	YES
A	REVIEWABILITY TEAM				
B	PRODUCT MANAGER TEAM EFFICACY REVIEW				
C	PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW				
D	PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW				
E	PRODUCT MANAGER TEAM REDUCTION REVIEW				
F	PRODUCT MANAGER			UKW	0/4 0/9 0/2
G	INTERAGENCY REFERRAL			CSFs acceptable	
H	COST-BENEFIT REVIEW			Label acceptable	
I	PUBLIC COMMENTS REVIEW				
J	EEC BRANCH INSPECTION EFFICACY				
K	EEC BRANCH HERBICIDE EFFICACY				
L	EEC BRANCH FUNGICIDE EFFICACY				
M	EEC BRANCH ROSENTHAL EFFICACY				
N	EEC BRANCH BIRMINGHAM EFFICACY				
O	CHERRYBAY BRANCH REGIONAL CHERRYBAY				
P	EEC BRANCH ENVIRON. HUMAN SAFETY				
Q	PERICULOUS BRANCH HUMAN SAFETY				
R	EEC BRANCH ENVIRON. HUMAN SAFETY				
S					
T					
PRODUCT MANAGER SIGNATURE				TYPE OF RESPONSE	
				CODE	

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

March 25, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: MON 78270 Herbicide (EPA File Symbol 524-LGT)
Amended Confidential Statement of Formula

Dear Mr. Tompkins:

In the original application to register "MON 78270 Herbicide" (EPA File Symbol 524-LGT), Monsanto included a CSF dated 5-Sep-2001. That was subsequently revised in favor of one Basic and one Alternate CSF, both dated 21-Jan-2002. On 21-Mar-2002, we have received a letter and Product Chemistry review from the Agency pointing out specific deficiencies that must be amended prior to product approval. This letter addresses those points, and the attached amended CSFs should resolve all issues. **When approved, the enclosed basic CSF and one alternate CSF will supercede the earlier proposals submitted, and serve as the only approved CSFs for this product.**

The following table describes how we have modified the CSF proposal to address each deficiency.

Issue	EPA Reference	Monsanto response
██████ LCL values	Letter point 2a and 4; Review conclusion 2A.	Agree. The 21-Jan-2002 CSFs have overcome this issue. No ██████ LCLs remain for intentionally added ingredients. A ██████ LCL remains

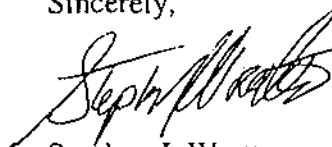
		only for one unintended impurity.
Inert names in wrong column	Letter point 2b. Review conclusion 2B.	Agree. Monsanto has moved all inert brand names to column 10.
Three inert names not cleared	Letter point 2c. Review conclusion 2C plus Confidential Appendix.	Additional information is provided in the attachment to demonstrate that these materials are exempt from food tolerance.
Storage Stability data	Letter point 3. Review conclusions 3.	Monsanto accepts this condition.

The Agency's 21-Mar-2002 letter also contained issues related to the product labeling that are addressed in an accompanying letter.

We believe the enclosed changes have resolved the problems with this CSF, so that the product can be approved simultaneously with the "MON 78623 57% Technical Solution" (524-LGE) from which it is derived.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 78270 Revised CSFs March.doc



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OPP Identifier Number

287959

Application for Pesticide – Section I

1. Company/Product Number Monsanto Co./ EPA Registration 524-LGT	2. EPA Product Manager James A. Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Monsanto Co./ MON 78270 Herbicide	PM # 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13 th St., N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: _____	

Section – II

<input checked="" type="checkbox"/> Amendment – Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification – Explain below.	<input type="checkbox"/> Other – Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission of revised Confidential Statement of Formula (CSF).

Section – III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per Container	If "Yes" Package wgt. No. per Container
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product
Manner in Which Label is Affixed to Product _____ _____ _____		<input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____	

Section – IV

Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Marsha C. Gray, Ph.D.	Title Regulatory Manager	Telephone No. (Include Area Code) (202) 383-2878
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
Signature 	3. Title Manager, Registrations	
Typed Name Stephen J. Wratten	5. Date March 25, 2002	

-108

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

March 25, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: MON 78270 Herbicide (EPA File Symbol 524-LGT)
Amended Label Text for Approval
Notification of Alternate Brand Name: MON 007 Herbicide

Dear Mr. Tompkins:

Monsanto has filed an application dated 5-Sep-2001 to register the new herbicide product named above, based on the potassium salt of glyphosate as the active ingredient. We have received your letter dated 21-Mar-2002 indicating two deficiencies related to the label. The new Master Label attached to this letter should overcome these concerns.

I also note that herein Monsanto wishes to declare an alternate brand name for this product: "MON 007 Herbicide", which is included in the attached label.

The following table describes how we have modified the CSF proposal to address each deficiency.

Issue	EPA Letter Reference	Monsanto response
PPE for 30% spray dilutions	Letter point 6.	Agree. Monsanto has deleted this statement in the two indicated places.
Child Resistant Package column	Letter point 7. Review conclusion 2B.	Monsanto proposes an alternate solution instead of a certification. All

		label references to residential uses have been removed. See attached explanation.
--	--	---

The Agency's 21-Mar-2002 letter also contained issues related to the Confidential Statement of Formula that are addressed in an accompanying letter.

For your review, one "MARKED" version of the new label proposal is included along with three "UNMARKED" copies. The "MARKED" version, as indicated in the footnote, shows the changes between this proposal and the earlier version you have reviewed. The important ones are those that pertain to removal of the "residential uses" from this registration. (see attached explanation).

We note that other minor formatting corrections were made in anticipation of preparing a final printed label as follows (page numbers are for MARKED version):

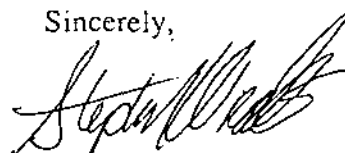
- ✓ Verifying consistency between the application methods listed in the "TYPES OF APPLICATIONS" paragraphs in each section with the bold sub-section headers within that section. See for instance page 19 of 121: "spot treatment" is a label sub-section had been omitted from the list, and has now been added. Similar changes were made in several places.
- ✓ Page 24 of 121. The final sentence under "PRECAUTIONS, RESTRICTIONS" for Herbs and Spices was a cut and paste errors, as there are no transplanted crops below to which this statement refers.
- ✓ Page 28 of 121. Technical experience has now convinced us that tomatoes are too sensitive for hooded or sprayer treatments, so we now choose to voluntarily eliminate that use.
- ✓ Page 33 to 37 of 121. A "TYPES OF APPLICATIONS" paragraph has been inserted throughout these sections to cross reference Section 9.0, so as to have the label be consistent with the format of Sections 8.1 to 8.11. This will reinforce the allowed application methods to growers.
- ✓ Page 34 of 121. Improve clarity of Florida and Texas Citrus application instructions.
- ✓ Page 35 of 121. Consistent use of the term "Directed Sprays" compared to Section 9.0 "TYPES OF APPLICATIONS".
- ✓ Page 42 of 121. Incorporate the paragraph CDPR has required concerning printing of the Roundup Ready Canola use in the booklet until CDPR approves that use.
- ✓ Page 46 to 47 of 121. Incorporate the same CDPR language for soybeans and remove the previous NOTE. When CDPR approve the Roundup Ready soybean use, this language will allow immediate introduction there without reprinting booklet labels.
- ✓ Page 62 to 64 of 121. Correct grammar relating to "Partial Control".

- ✓ • Page 64 to 68 of 121. Substitute "C" for "For Control" and "PC" for "For Partial Control" in the Woody Brush table so that it will fit better into the narrow printed booklet pages.
- ✓ • Spelling of "shadehouse" to one word throughout.

Monsanto appreciates the opportunity to make these label revision now before approval, so that production of final printed labeling can be streamlined when approval occurs this spring.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 78270 Amend.doc

Child Resistant Packaging: Explanation of Proposed Label Changes

1. After Review of 40 CFR 157.20, 157.21, 157.22, and 157.24, Monsanto concurs that the combination of the inhalation toxicity findings (MRID 45504804) and the inclusion of residential uses requires the use of child-resistant packaging for MON 78270 Herbicide.
2. This product is designed as an Agricultural Use herbicide, with some additional uses on non-agricultural industrial sites. The mention of residential uses in Part III of the Master Label pertaining to Industrial, Turf, and Ornamental was not a key focus for this product. There is no intention to market this product to homeowner customers for use around the home.
3. The container compatibility testing that Monsanto has completed regarding container and closure integrity when in contact with the MON 78270 formulation has not been conducted using child-resistant packages. Our stewardship and business commitments cannot permit commercialization of packages that have not passed such internal testing, and we cannot therefore certify that child resistant packaging will be used at this time.
4. Therefore, Monsanto has chosen to make label revisions to eliminate the conclusion that the product is labeled for "Residential Uses", according to the 40 CFR 157.21 definition. These changes consist of:
 - a. Complete deletion of Part III.8.7 Parks, Recreational, and Residential Areas. (Page 103 of 121 in MARKED version).
 - b. Rearrangement of the Table of Contents, Part III, Page 86 of 121.
 - c. Deletion in Part III.8.3 (Page 99 of 121) to uses at "apartment complexes", "recreational areas", "residential areas", "schools", and "parks".
 - d. Insertion of a restriction into Directions for Use in greenhouses as follows: "Do not use in residential greenhouses". This occurs in Part III.8.6 (Page 103 of 121) and in Part I.12.2 (Page 49 of 121).
5. We have searched the rest of the proposed label text to ensure that there are no remaining Directions for Use that specify application using the words "residential", "residence", "park", "school", "house", "home", "garden", "apartment", or "daycare".
6. Finally, to provide additional safeguards, in light of 40 CFR 157.24(a)(2), Monsanto agrees to place a statement on all container labels for package sizes smaller than 5 gallons stating: **"This container is not to be sold to homeowners for residential use."** (Pages 2 and 85 of 121). Because the child-resistant packaging requirement only pertains to smaller container sizes (less than 5 gallons) that could reasonable be expected to be stored in residential sites, this container-specific labeling will doubly ensure against sale into this segment.
7. Monsanto is confident that the combination of removing such residential application sites and prohibiting sale of smaller containers to homeowners for residential use will achieve the goal of keeping the product away from small children.



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OP287966P Identifier
Number

287966

Application for Pesticide – Section I

1. Company/Product Number Monsanto Co./ EPA Registration 524-LGT	2. EPA Product Manager James A. Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Monsanto Co./ MON 78270 Herbicide	PM # 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13 th St., N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: _____	

Section – II

<input checked="" type="checkbox"/> Amendment – Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated
<input type="checkbox"/> Resubmission in response to Agency letter dated	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification – Explain below.	<input type="checkbox"/> Other – Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Submission and request for approval, amended master label MON 78270 Herbicide; Notification of alternate brand name (ABN), MON 007 Herbicide.

Section – III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per Container	If "Yes" Package wgt. No. per Container
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container Various	5. Location of Label Directions <input type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Other plastic sleeve <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			

Section – IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Marsha C. Gray, Ph.D.	Title Regulatory Manager	Telephone No. (Include Area Code) (202) 383-2878
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Manager, Registrations	
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date March 25, 2002	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 1.25 hours per response for registration and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the completed form to this address.

Certification with Respect to Citation of Data

Applicant's/Registrant's Name, Address, and Telephone Number Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 202-783-2460	EPA Registration Number/File Symbol 524-xxxx LG 537
Active Ingredient(s) and/or representative test compound(s) Glyphosate	Date Sep 5, 2001
General Use Pattern(s) (list all those claimed for this product using 40 CFR Part 158) Terrestrial food, terrestrial non-food	Product Name MON 78270 Herbicide

NOTE: If your product is a 100% repackaging of another purchased EPA-registered product labeled for all the same uses on your label, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

☐ I am responding to a Data-Call-In Notice, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

SECTION I: METHOD OF DATA SUPPORT (Check one method only)

☐ I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).

☒ I am using the selective method of support (or cite-all option under the selective method), and have included with this form a completed list of data requirements (the Data Matrix form must be used).

SECTION II: GENERAL OFFER TO PAY

[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements]

☐ I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.

SECTION III: CERTIFICATION

I certify that this application for registration, this form for reregistration, or this Data-Call-In response is supported by all data submitted or cited in the application for registration, the form for reregistration, or the Data-Call-In response. In addition, if the cite-all option or cite-all option under the selective method is indicated in Section I, this application is supported by all data in the Agency's files that (1) concern the properties or effects of this product or an identical or substantially similar product, or one or more of the ingredients in this product; and (2) is a type of data that would be required to be submitted under the data requirements in effect on the date of approval of this application if the application sought the initial registration of a product of identical or similar composition and uses.

☒ I certify that for each exclusive use study cited in support of this registration or reregistration, that I am the original data submitter or that I have obtained the written permission of the original data submitter to cite that study.

I certify that for each study cited in support of this registration or reregistration that is not an exclusive use study, either: (a) I am the original data submitter; (b) I have obtained the permission of the original data submitter to use the study in support of this application; (c) all periods of eligibility for compensation have expired for the study; (d) the study is in the public literature; or (e) I have notified in writing the company that submitted the study and have offered (i) to pay compensation to the extent required by sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA; and (ii) to commence negotiations to determine the amount and terms of compensation, if any, to be paid for the use of the study.

I certify that in all instances where an offer of compensation is required, copies of all offers to pay compensation and evidence of their delivery in accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and will be submitted to the Agency upon request. Should I fail to produce such evidence to the Agency upon request, I understand that the Agency may initiate action to deny, cancel or suspend the registration of my product in conformity with FIFRA.

I certify that the statements I have made on this form and all attachments to it are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature 	Date 5-Sept-01	Typed or Printed Name and Title Stephen J. Wratten, Manager, Registration
---------------	-------------------	---

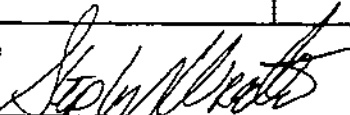


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reviewing the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date Sep 5, 2001			EPA Reg No./File Symbol 524- xxx LGT		Page 1 of 2
Applicant's/Registrant's Name & Address Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 202-783-2460			Product MON 78270 Herbicide		
Ingredient Glyphosate					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
860.1100; 860.1200	Administrative Materials in Support of Registration of MON 78270 Herbicide	This Submission	Monsanto	OWN	
830 Series	Product Chemistry Data to Support the Registration of MON 78270 Herbicide	This Submission	Monsanto	OWN	
870.1100	An Acute Oral Toxicity Study in Rats with MON 78270	This Submission	Monsanto	OWN	
870.1200	An Acute Dermal Toxicity Study in Rats with MON 78270	This Submission	Monsanto	OWN	
870.1300	An Acute Nose-Only Inhalation Toxicity Study in Rats with MON 78270	This Submission	Monsanto	OWN	
Signature 			Name and Title Manager, Registration Stephen J. Wratten		Date 5 Sept 01

EPA Form 8570-35 (9-97) Electronic and Paper versions available. Submit only Paper version.

Agency Internal Use Copy

475

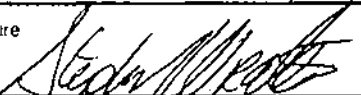


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
401 M Street, S.W.
WASHINGTON, D.C. 20460

Form Approved OMB No. 2070-0060

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

DATA MATRIX

Date Sep 5, 2001		EPA Reg No./File Symbol 524- xxx LGT		Page 2 of 2	
Applicant's/Registrant's Name & Address Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 202-783-2460		Product MON 78270 Herbicide			
Ingredient Glyphosate					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
870.2400	A Primary Eye Irritation Study in Rabbits with MON 78270	This Submission	Monsanto	OWN	
870.2500	A Primary Skin Irritation Study in Rabbits with MON 78270	This Submission	Monsanto	OWN	
870.2500	A Primary Skin Irritation Study in Rabbits with 30% Dilution of MON 78270	This Submission	Monsanto	OWN	
870.2600	A Dermal Sensitization Study in Guinea Pigs with MON 78270 - Modified Buehler Design	This Submission	Monsanto	OWN	
	For all other data requirements for glyphosate please refer to the Data Matrix included in Section C of the present submission		Monsanto IR-4 Public Literature	OWN PER PL	
Signature 			Name and Title Manager, Registration Stephen J. Wratten		Date 5 Sept 01

Part II
Petition for Registration of a New Pesticide Product
MON 78270 Herbicide

0120:0287

47

Table 1. Information on Regulatory Status of Inert Ingredients

CROSS REFERENCE NUMBER: 2

This cross reference number is used on this place holder page in place of the following whole page(s) which are located at the indicated page and section reference.

DELETED PAGE(S):

Located in Confidential Attachment.

Page	Reason for Deletion	Cross Reference Pages in Confidential Attachment	FIFRA Ref.
17 of 187	Identity of Inert Ingredients	7 of 11	10(d)(1)(c)

01700187

Table 2. Composition Information for Inert Ingredients

CROSS REFERENCE NUMBER: 3

This cross reference number is used on this place holder page in place of the following whole page(s) which are located at the indicated page and section reference.

DELETED PAGE(S):

Located in Confidential Attachment.

Page	Reason for Deletion	Cross Reference Pages in Confidential Attachment	FIFRA Ref.
18 of 187	Identity of Inert Ingredients	9, 10, & 11 of 11	10(d)(1)(c)

Section C
Data Reference List

**The following Data Matrix lists the study data supporting MON 78270
Herbicide and the MON 78623 58% Technical Concentrate (524-LGE)
Glyphosate Manufacturing Use product used in it.**

1-34070187

360

PRODUCT
CHEMISTRY40 CFR
158.150-158.190
(830 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

PRODUCT IDENTITY:

61-1	Product Identity & Disclosure of Ingredients (MP)	+	41228201	08/30/1989	R.D. 953	Monsanto	OWN
	Product Identity & Disclosure of Ingredients (MP)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Product Identity & Disclosure of Ingredients (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Product Identity & Disclosure of Ingredients (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
61-2	Beginning Materials and Manufacturing Process (MP)	+	41228201	08/30/1989	R.D. 953	Monsanto	OWN
	Beginning Materials and Manufacturing Process (MP)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Beginning Materials and Manufacturing Process (MP)	+	45317301	01/26/2001	R.D. 1526	Monsanto	OWN
	Beginning Materials and Manufacturing Process (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Beginning Materials and Manufacturing Process (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
61-3	Formation of Impurities (MP - TGA)	+	41228201	08/30/1989	R.D. 953	Monsanto	OWN
	Formation of Impurities (MP - TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Formation of Impurities (MP - TGA)	+	41228202	08/30/1989	R.D. 953	Monsanto	OWN
	Formation of Impurities (MP - TGA)	+	45317301	01/26/2001	R.D. 1526	Monsanto	OWN
	Formation of Impurities (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Formation of Impurities (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN

ANALYSIS AND CERTIFICATION OF INGREDIENTS

62-1	Preliminary Analysis (MP - TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Preliminary Analysis (MP - TGA)	+	41228202	08/30/1989	R.D. 953	Monsanto	OWN
	Preliminary Analysis (MP - TGA)	+	41228201	08/30/1989	R.D. 953	Monsanto	OWN
	Preliminary Analysis (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Preliminary Analysis (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
62-2	Certification of Limits (MP - TGA)	+	41228202	08/30/1989	R.D. 953	Monsanto	OWN
	Certification of Limits (MP - TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Certification of Limits (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Certification of Limits (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN

PRODUCT
CHEMISTRY 40 CFR
158.150-158.190
(830 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
62-3	Analytical Methods for Enforcement of Limits (MP - TGA)	+	41228202	08/30/1989	R.D. 953	Monsanto	OWN
	Analytical Methods for Enforcement of Limits (MP - TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Analytical Methods for Enforcement of Limits (MP - TGA)	+	45317301	01/26/2001	R.D. 1526	Monsanto	OWN
	Analytical Methods for Enforcement of Limits (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Analytical Methods for Enforcement of Limits (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
PHYSICAL AND CHEMICAL CHARACTERISTICS							
63-2	Color (MP & TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Color (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Color (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-3	Physical State (MP & TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Physical State (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Physical State (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-4	Odor (MP & TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Odor (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Odor (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-5	Melting Point (TGA)	+	51977	06/01/1976	R.D. 102	Monsanto	OWN
63-6	Boiling Point (TGA)	NR					
63-7	Density, Bulk Density or Specific Gravity (MP & TGA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Density, Bulk Density or Specific Gravity (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Density, Bulk Density or Specific Gravity (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-8	Solubility (TGA or PA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
63-9	Vapor Pressure (TGA or PA)	+	41096101	05/10/1989	R.D. 924	Monsanto	OWN
	Vapor Pressure (524-333)	+	43434505	10/10/1994	R.D. 1276	Monsanto	OWN
63-10	Dissociation Constant (TGA or PA)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
63-11	Octanol/Water Partition Coefficient (PA)	+	108192	06/05/1978	R.D. 181	Monsanto	OWN
63-12	pH (MP & TGA)	+	152385	07/30/1984	R.D. 542	Monsanto	OWN
	pH (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN

450

PRODUCT
CHEMISTRY40 CFR
158.150-158.190
(830 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	pH (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-13	Stability (TGA)	+	152385	07/30/1984	R.D. 542	Monsanto	OWN
63-14	Oxidizing or Reducing Action (MP)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Oxidizing or Reducing Action (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Oxidizing or Reducing Action (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-15	Flammability (MP)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Flammability (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Flammability (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-16	Explosibility (MP)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Explosibility (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Explosibility (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-17	Storage Stability (MP)	+	152385	07/30/1984	R.D. 542	Monsanto	OWN
	Storage Stability (524-xxx)	+	in progress				
	Storage Stability (524-LGE)	+	in progress				
63-18	Viscosity (MP)	NR					
	Viscosity (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Viscosity (524-LGE)	+	45381101	03/28/2001	R.D. 1533	Monsanto	OWN
63-19	Miscibility (MP)	NR					
	Miscibility (524-xxx)	NR					
	Miscibility (524-LGE)	NR					
63-20	Corrosion Characteristics (MP)	+	161333	06/30/1986	R.D. 690	Monsanto	OWN
	Corrosion Characteristics (524-xxx)	+	in progress				
	Corrosion Characteristics (524-LGE)	+	in progress				
63-21	Dielectric Breakdown Voltage						
	Dielectric Breakdown Voltage (524-xxx)	NR					
	Dielectric Breakdown Voltage (524-LGE)	NR					
64-1	Submittal of Samples (PAI)						

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 3 of 33

483

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE/ -xxxTOXICOLOGY 40
CFR 158.340
(870 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	------------	-----------------	-------------	--------------------------	-----------	--------

ACUTE TESTING

81-1	Oral LD50 - Rat (MP & TGAI)	+	41400601	02/06/1990	R.D. 976	Monsanto	OWN
	Oral LD50 - Rat (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Oral LD50 - Rat (524-LGE)	+	45381102	03/28/2001	R.D. 1533	Monsanto	OWN
81-2	Dermal LD50 (MP & TGAI)	+	41400602	02/06/1990	R.D. 976	Monsanto	OWN
	Dermal LD50 (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Dermal LD50 (524-LGE)	+	45381103	03/28/2001	R.D. 1533	Monsanto	OWN
81-3	Inhalation LC50 - Rat (MP & TGAI)	NR					
	Inhalation LC50 - Rat (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Inhalation LC50 - Rat (524-LGE)		waiver request	03/28/2001	R.D. 1533	Monsanto	OWN
81-4	Primary Eye Irritation - Rabbit (MP)	+	41400603	02/06/1990	R.D. 976	Monsanto	OWN
	Primary Eye Irritation - Rabbit (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Primary Eye Irritation - Rabbit (524-LGE)	+	45381104	03/28/2001	R.D. 1533	Monsanto	OWN
81-5	Primary Dermal Irritation (MP)	+	41400604	02/06/1990	R.D. 976	Monsanto	OWN
	Primary Dermal Irritation (524-xxx) - 30%	+	this submission		R.D. 1550	Monsanto	OWN
	Primary Dermal Irritation (524-xxx)		this submission		R.D. 1550	Monsanto	OWN
	Primary Dermal Irritation (524-LGE)	+	45381105	03/28/2001	R.D. 1533	Monsanto	OWN
81-6	Dermal Sensitization (MP)	(NR)	137138	12/20/1983	R.D. 515	Monsanto	OWN
	Dermal Sensitization (524-xxx)	+	this submission		R.D. 1550	Monsanto	OWN
	Dermal Sensitization (524-LGE)	+	45381106	03/28/2001	R.D. 1533	Monsanto	OWN
81-7	Acute Delayed Neurotoxicity - Hen (TGAI)	NR					
	Acute Delayed Neurotoxicity - Hen (EP)	(NR)	54494	12/22/1976	R.D. 108	Monsanto	OWN

SUBCHRONIC TESTING

82-1	90-Day Feeding - Rodent (TGAI)	+	40559401	03/16/1988	R.D. 860	Monsanto	OWN
	90-Day Feeding - Nonrodent (TGAI)	+	40557	01/15/1973	R.D. 40	Monsanto	OWN
82-2	21-Day Dermal (TGAI)	+	98460	03/22/1982	R.D. 413	Monsanto	OWN
	21-Day Dermal (EP)	+	67045	01/15/1973	R.D. 40	Monsanto	OWN
			67046	01/15/1973	R.D. 40	Monsanto	OWN

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 4 of 33

1:86:0287

100

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE/ -xxxTOXICOLOGY 40
CFR 158.340
(870 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			108128	07/12/1974	R.D. 51	Monsanto	OWN
82-3	90-Day Dermal (TGAI)	NR					
82-4	90-Day Inhalation - Rat (TGAI)	NR					
82-5	90-Day Neurotoxicity - Hen (TGAI)	NR					
	90-Day Neurotoxicity - Mammal (TGAI)	NR					
CHRONIC TESTING							
83-1	Chronic Feeding - Rodent (TGAI)	+	41643801	09/26/1990	R.D. 1014	Monsanto	OWN
			41728701	12/17/1990	R.D. 1014	Monsanto	OWN
	Chronic Feeding - Nonrodent (TGAI)	+	153374	10/17/1985	R.D. 636	Monsanto	OWN
			162912	08/11/1986	R.D. 698	Monsanto	OWN
83-2	Oncogenicity Study - Rat (TGAI)	+	41643801	09/26/1990	R.D. 1014	Monsanto	OWN
			41728701	12/17/1990	R.D. 1014	Monsanto	OWN
	Oncogenicity Study - Mouse (TGAI)	+	130406	07/29/1983	R.D. 480	Monsanto	OWN
			150564	10/07/1985	R.D. 635	Monsanto	OWN
			153376	10/28/1985	R.D. 643	Monsanto	OWN
83-3	Teratology - Rat (TGAI)	+	46362	05/13/1980	R.D. 300	Monsanto	OWN
	Teratology - Rabbit (TGAI)	+	46363	05/13/1980	R.D. 300	Monsanto	OWN
83-4	Reproduction, 2-Generation (TGAI)	+	41621501	08/30/1990	R.D. 1013	Monsanto	OWN
MUTAGENICITY TESTING							
84-2	Gene Mutation (TGAI)	+	78619	04/20/1979	R.D. 236	Monsanto	OWN
			132681	11/04/1983	R.D. 504	Monsanto	OWN
			137640	02/09/1984	R.D. 504	Monsanto	OWN
			78620	04/20/1979	R.D. 236	Monsanto	OWN
	Chromosomal Aberration (TGAI)	+	46364	05/13/1980	R.D. 300	Monsanto	OWN
			132682	11/04/1983	R.D. 504	Monsanto	OWN
			132683	11/04/1983	R.D. 504	Monsanto	OWN
			132684	11/04/1983	R.D. 504	Monsanto	OWN
			132685	11/04/1983	R.D. 504	Monsanto	OWN
84-4	Other Mechanisms of Mutagenicity (TGAI)	+	132686	11/04/1983	R.D. 504	Monsanto	OWN

149000187

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 5 of 33

485

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE/ -xxx

TOXICOLOGY 40
CFR 158.340
(870 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			132680	11/04/1983	R.D. 504	Monsanto	OWN
SPECIAL TESTING							
85-1	General Metabolism (PAIRA)	+	40767101	08/11/1988	R.D. 877	Monsanto	OWN
			40767102	08/11/1988	R.D. 877	Monsanto	OWN
85-2	Dermal Penetration	(NR)	137139	12/20/1983	R.D. 515	Monsanto	OWN
			137140	12/20/1983	R.D. 515	Monsanto	OWN
86-1	Domestic Animal Safety	NR					

15060887

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE/ -xxxWILDLIFE &
AQUATICS
40 CFR 158.490
(850 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
AVIAN AND MAMMALIAN TESTING							
71-1	Avian Oral LD50 (TGA)	+	108204	03/01/1978		Monsanto	OWN
71-2	Avian Dietary LC50 (TGA)	+	108107	07/12/1974	R.D. 51	Monsanto	OWN
	Avian Dietary LC50 (EP)		44465701	01/19/1998	R.D. 1399	Monsanto	OWN
			44465702	01/19/1998	R.D. 1399	Monsanto	OWN
71-3	Wild Mammal Toxicity (TGA)	NR					
71-4	Avian Reproduction (TGA)	+	108207	11/13/1978	R.D. 211	Monsanto	OWN
			111953	11/13/1978	R.D. 211	Monsanto	OWN
71-5	Simulated / Actual Field Testing -	NR					
AQUATIC ORGANISM TESTING							
72-1	Freshwater Fish LC50 (TGA)	+	108112	07/12/1974	R.D. 51	Monsanto	OWN
			136339	11/28/1978	R.D. 215	Monsanto	OWN
	Freshwater Fish LC50 (MUP)		44715409	12/10/1998	R.D. 1406	Monsanto	OWN
72-1	Freshwater Fish LC50 (TEP)	+	108112	07/12/1974	R.D. 51	Monsanto	OWN
			70894	03/30/1981	R.D. 350	Monsanto	OWN
			70895	03/30/1981	R.D. 350	Monsanto	OWN
			70896	03/30/1981	R.D. 350	Monsanto	OWN
			70897	03/30/1981	R.D. 350	Monsanto	OWN
			40579201	03/25/1988	R.D. 862	Monsanto	OWN
			40579202	03/25/1988	R.D. 862	Monsanto	OWN
			40579203	03/25/1988	R.D. 862	Monsanto	OWN
72-2	Acute LC50 Freshwater Invertebrates (TGA)	+	136338	11/28/1978	R.D. 215	Monsanto	OWN
72-2	Acute LC50 Freshwater Invertebrates (TEP)	+	108109	07/12/1974	R.D. 51	Monsanto	OWN
			70893	03/30/1981	R.D. 350	Monsanto	OWN
			44715410	12/10/1998	R.D. 1406	Monsanto	OWN
72-3	Acute LC50 Estuarine and Marine	+	108110	07/12/1974	R.D. 51	Monsanto	OWN
			108111	07/12/1974	R.D. 51	Monsanto	OWN

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 7 of 33

487

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE/ -xxx

WILDLIFE &
AQUATICS
40 CFR 158.490
(850 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	Organisms (TGA)		136339	11/28/1978	R.D. 215	Monsanto	OWN
73-4	Fish Early Life Stage and Aquatic Invertebrate Life-Cycle (TGA)	+	124761	12/20/1982	R.D. 453	Monsanto	OWN
			124762	12/20/1982	R.D. 453	Monsanto	OWN
			124763	12/20/1982	R.D. 453	Monsanto	OWN
72-5	Fish - Life-Cycle (TGA)	+	108172	12/22/1978	R.D. 220	Monsanto	OWN
72-6	Aquatic Organism Accumulation (TGA)	+	111942	07/12/1974	R.D. 51	Monsanto	OWN
			94971	02/26/1982	R.D. 407	Monsanto	OWN
			108173	12/22/1978	R.D. 220	Monsanto	OWN
			41228301	09/05/1989	R.D. 955	Monsanto	OWN
			41228302	09/05/1989	R.D. 955	Monsanto	OWN
72-7	Simulated or Actual Field Testing (TEP)	NR					

152010187

108

PLANT
PROTECTION 40
CFR 158.540
(850 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

TARGET AREA PHYTOTOXICITY

121-1 Target Area Phytotoxicity (TEP)

NR

NONTARGET AREA PHYTOTOXICITY

TIER I:

122-1 Seed Germination/Seedling Emergence (TGA)

+

40159301

04/10/1987

R.D. 767

Monsanto

OWN

122-1 Vegetative Vigor (TGA)

(1)

122-2 Aquatic Plant Growth (TGA)

(2)

TIER II:

123-1 Seed Germination/Seedling Emergence (TGA)

NR

123-1 Vegetative Vigor (TGA)

+

43088701

01/17/1994

R.D. 1219

Monsanto

OWN

123-2 Aquatic Plant Growth (TGA)

+

40236901

06/12/1987

R.D. 779

Monsanto

OWN

40236902

06/12/1987

R.D. 778

Monsanto

OWN

40236903

06/12/1987

R.D. 781

Monsanto

OWN

40236904

06/12/1987

R.D. 782

Monsanto

OWN

40236905

06/12/1987

R.D. 783

Monsanto

OWN

TIER III:

124-1 Terrestrial Field (TEP)

NR

124-2 Aquatic Field (TEP)

NR

(1) Tier I Vegetative Vigor studies were combined with Tier II Vegetative Vigor studies.

(2) Tier I Aquatic Plant Growth studies were combined with Tier II Aquatic Plant Growth studies.

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

NONTARGET
INSECT 40
CFR 158.590
(850 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

POLLINATORS:

141-1 Honeybee Acute Contact Toxicity (TGA)	+	108108	07/12/1974	R.D. 51	Monsanto	OWN
Honeybee Acute Contact Toxicity (EP)		44465703	01/19/1998	R.D. 1399	Monsanto	OWN
141-2 Honeybee - Toxicity of Residues on Foliage (TEP)	NR					
141-4 Honeybee Subacute Feeding Study (TEP)	(1)					
141-5 Field Testing for Pollinators (TEP)	NR					

AQUATIC INSECTS:

142-1 Acute Toxicity to Aquatic Insects	(2)
142-2 Aquatic Insect Life-Cycle Study	(2)
142-3 Simulated or Actual Field Testing for Aquatic Insects	(2)

PREDATORS AND PARASITES:

143-1 thru 143-3	(2)
------------------	-----

(1) Reserved pending development of test methodology.

(2) Reserved pending further evaluation to determine what and when data should be required, and to develop appropriate test methods.

154060487

11/17/01

REENTRY
PROTECTION 40
CFR 158.390
(875 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

REENTRY PROTECTION

132-1 Foliar Dissipation (TEP)	NR
132-1 Soil Dissipation (TEP)	NR
133-3 Dermal Exposure (TEP)	NR
133-4 Inhalation Exposure (TEP)	NR

13500187

491

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxxENVIRONMENTAL
FATE
40 CFR 158.290
(835 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
DEGRADATION STUDIES - LAB							
161-1	Hydrolysis (TGA) or PAIRA)	+	108192	06/05/1978	R.D. 181	Monsanto	OWN
	Hydrolysis (MUP)		44715408	12/10/1998	R.D. 1406	Monsanto	OWN
PHOTODEGRADATION							
161-2	In Water (TGA) or PAIRA)	+	41689101	11/01/1990	R.D. 1020	Monsanto	OWN
161-3	On Soil (TGA) or PAIRA)	+	41355101	12/18/1989	R.D. 972	Monsanto	OWN
161-4	In Air (TGA) or PAIRA)	NR					
METABOLISM STUDIES - LAB							
162-1	Aerobic Soil (TGA) or PAIRA)	+	41742901	01/03/1991	R.D. 1031	Monsanto	OWN
			43272501	06/24/1992	R.D. 1031 Supl	Monsanto	OWN
162-2	Anaerobic Soil (TGA) or PAIRA)	NR					
162-3	Anaerobic Aquatic (TGA) or PAIRA)	+	41723701	12/07/1990	R.D. 1029	Monsanto	OWN
			42372502	06/24/1992	R.D. 1029 Supl	Monsanto	OWN
162-4	Aerobic Aquatic (TGA) or PAIRA)	+	41723601	12/07/1990	R.D. 1030	Monsanto	OWN
			42372503	06/24/1992	R.D. 1030 Supl	Monsanto	OWN
MOBILITY STUDIES							
163-1	Leaching and Adsorption/Desorption (TGA) or PAIRA)	+	39938	07/12/1974	R.D. 51	Monsanto	OWN
			108192	06/05/1978	R.D. 181	Monsanto	OWN
			64703	12/16/1980	R.D. 335	Monsanto	OWN
163-2	Volatility - Lab (TEP)	NR					
163-3	Volatility - Field (TEP)	NR					
DISSIPATION STUDIES - FIELD							
164-1	Soil (TEP)	+	39939	07/12/1974	R.D. 51	Monsanto	OWN
			39940	07/12/1974	R.D. 51	Monsanto	OWN
			162910	08/06/1986	R.D. 696	Monsanto	OWN
			162922	08/07/1986	R.D. 697	Monsanto	OWN
			41096103	05/10/1989	R.D. 924	Monsanto	OWN

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 12 of 33

1560:0187

ENVIRONMENTAL
FATE
40 CFR 158.290
(835 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			42765001	05/03/1993	R.D. 1165	Monsanto	OWN
164-2	Aquatic Sediment (TEP)	+	39942	07/12/1974	R.D. 51	Monsanto	OWN
			40881601	11/09/1988	R.D. 898	Monsanto	OWN
			42383201	06/29/1992	R.D. 898 Supp	Monsanto	OWN
164-3	Forestry (TEP)	+	84657	09/29/1981	R.D. 379	Monsanto	OWN
			93922	02/01/1982	R.D. 379	Monsanto	OWN
			162923	06/17/1983	R.D. 379	Monsanto	OWN
			134008	11/18/1983	R.D. 506	Monsanto	OWN
			162923	08/07/1986	R.D. 697	Monsanto	OWN
			41552801	06/02/1990	R.D. 993	Monsanto	OWN
164-4	Combination and Tank Mixes	NR					
164-5	Soil, Long-Term (TEP)	NR					
ACCUMULATION STUDIES							
165-1	Rotational Crops - Confined (PAIRA)	+	41543201	06/29/1990	R.D. 991	Monsanto	OWN
			41543202	06/29/1990	R.D. 991	Monsanto	OWN
			42372504	06/24/1992	R.D. 991, Supl	Monsanto	OWN
165-2	Rotational Crops - Field (TEP)	+	108159	10/14/1977	R.D. 141	Monsanto	OWN
165-3	Irrigated Crops (TEP)	+	40541305	02/23/1988	R.D. 856	Monsanto	OWN
165-4	In Fish (TGA1 or PAIRA)	+	108173	12/22/1978	R.D. 220	Monsanto	OWN
165-5	In Aquatic Non-target Organisms (TEP)	+				Monsanto	OWN

493

13700187

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

RESIDUE CHEMISTRY

171-2	Chemical Identity (TGA)	+	41228201	08/30/1989	R.D. 953	Monsanto	OWN
171-3	Directions for Use	(1)					

NATURE OF THE RESIDUE

171-4(a)	Plants (PAIRA)	+	Appendix A				
171-4(b)	Livestock (PAIRA and Plant Metabolites)	+	40541301	02/23/1988	R.D. 856	Monsanto	OWN
		+	40541302	02/23/1988	R.D. 856	Monsanto	OWN

RESIDUE METHODOLOGY

Residue Analytical Method - Plants (TGA) and							
171-4(c)	Metabolites	+	108231	07/24/1979	R.D. 251	Monsanto	OWN
			164729	10/20/1986	R.D. 707	Monsanto	OWN
			40502601	01/29/1988	R.D. 849	Monsanto	OWN
Residue Analytical Method - Animals (TGA) and							
171-4(d)	Metabolites	+	40541303	02/23/1988	R.D. 856	Monsanto	OWN
Residue Analytical Method - Water (TGA) and							
171-4	Metabolites	+	159419	05/19/1986	R.D. 677	Monsanto	OWN
			40502605	01/29/1988	R.D. 848	Monsanto	OWN
171-4(e)	Storage Stability (PAI)(In Plants, Animal Products, a	+	40502605	01/29/1988	R.D. 848	Monsanto	OWN
		+	40532004	02/23/1988	R.D. 855	Monsanto	OWN
		+	41472002	04/02/1990	R.D. 977	Monsanto	OWN
		+	41573501	07/25/1990	R.D. 1005	Monsanto	OWN
		+	41940701	07/12/1991	R.D. 1051	Monsanto	OWN

MAGNITUDE OF THE RESIDUE

171-4(k)	Crop Field Trials (TEP)	+	Appendix B				
171-4(l)	Processed Food/Feed (EP)	+	Appendix B				

1580:0387

1127

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
171-4(j)	Meat/Milk/Poultry/Eggs (TGA1 or Plant Metabolites)	+	108115	07/12/1974	R.D. 51	Monsanto	OWN
			40532001	02/23/1988	R.D. 855	Monsanto	OWN
			40532002	02/23/1988	R.D. 855	Monsanto	OWN
			40532003	02/23/1988	R.D. 855	Monsanto	OWN
			40532004	02/23/1988	R.D. 855	Monsanto	OWN
171-4(f)	Potable Water (EP)	+	Appendix C				
171-4(g)	Fish (EP)	+	Appendix D				
171-4(h)	Irrigated Crops (EP)	+	Appendix B				
171-4(i)	Food Handling (EP)	NR					
171-5	Reduction of Residue	NR					
171-6	Proposed Tolerances	(2)					
171-7	Reasonable Grounds in Support of the Petition	(3)					
(1)	Directions for Use are contained in Product Labels or Section B of Petitions						
(2)	Proposed Tolerances are contained in Section F of Petitions						
(3)	Reasonable Grounds in Support of the Petition are contained in Section G of Petitions						

1590087

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 15 of 33

495

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)RESIDUE
CHEMISTRY
APPENDIX A

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

NATURE OF THE RESIDUE: PLANTS

171-4(a)

Corn	137903	07/12/1974	R.D. 51	Monsanto	OWN
	47778	07/12/1974	R.D. 51	Monsanto	OWN
Roundup Ready® Corn	43712701	06/29/1995	R.D. 1306	Monsanto	OWN
Wheat	137903	07/12/1974	R.D. 51	Monsanto	OWN
	47778	07/12/1974	R.D. 51	Monsanto	OWN
Soybeans	137903	07/12/1974	R.D. 51	Monsanto	OWN
	47778	07/12/1974	R.D. 51	Monsanto	OWN
Roundup Ready® Soybeans	43330601	07/22/1994	R.D. 1260	Monsanto	OWN
Cotton	137903	07/12/1974	R.D. 51	Monsanto	OWN
	47778	07/12/1974	R.D. 51	Monsanto	OWN
Roundup Ready® Cotton	44279301	05/19/1997	R.D. 1371	Monsanto	OWN
Grapes	38981	10/04/1974		Monsanto	OWN
Citrus	41165	01/19/1976		Monsanto	OWN
Coffee	51983	06/01/1976		Monsanto	OWN
Sugarcane	61558	03/01/1976		Monsanto	OWN
Pome Fruit	108129	09/01/1976		Monsanto	OWN

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	Forage Grass and Legumes		108147	04/28/1978		Monsanto	OWN
	Sugar Beets		108152	12/09/1977		Monsanto	OWN
	Grapes		38771	10/04/1974	R.D. 53	Monsanto	OWN
	Nut Crops		111945	11/30/1976	R.D. 110	Monsanto	OWN
	Alfalfa		108133	12/31/1976		Monsanto	OWN
	Vegetables		108159	10/15/1977		Monsanto	OWN
	Roundup Ready® Canola		44541201	04/03/1998	R.D. 1408	Monsanto	OWN

497

16100187

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

RESIDUE
CHEMISTRY
APPENDIX B

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

MAGNITUDE OF THE RESIDUE: CROPS, IRRIGATED CROPS, AND PROCESSED COMMODITIES

171-4(k,l) ROOT AND TUBER VEGETABLES GROUP:

Beets, garden

Carrots

Radishes

Potatoes

108159	10/14/1977	R.D. 141	Monsanto	OWN
39381	09/25/1975		Monsanto	OWN
108159	10/14/1977	R.D. 141	Monsanto	OWN
108151	12/09/1977	R.D. 148	Monsanto	OWN
40785302	07/29/1988	R.D. 878	Monsanto	OWN
41947001	07/15/1991	R.D. 1053	Monsanto	OWN
41947002	07/15/1991	R.D. 1053	Monsanto	OWN
43906101	01/22/1996	R.D. 1338	Monsanto	OWN

Processed Potato Commodities

40785302	07/29/1988	R.D. 878	Monsanto	OWN
43906101	01/22/1996	R.D. 1338	Monsanto	OWN

Sugar Beets

108159	10/14/1977	R.D. 141	Monsanto	OWN
108151	12/09/1977	R.D. 148	Monsanto	OWN
39381	09/25/1975		Monsanto	OWN
40785304	07/29/1988	R.D. 878	Monsanto	OWN
43315703	07/19/1994	R.D. 1236	Monsanto	OWN
44331601	07/11/1997	R.D. 1384	Monsanto	OWN
44331602	07/11/1997	R.D. 1384	Monsanto	OWN
44331603	07/11/1997	R.D. 1384	Monsanto	OWN

Roundup Ready® Sugar Beets

Sweet Potatoes

16200287

498

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	Turnip		40835201	10/03/1988	3204	IR-4	PER

171-4(k,l) LEAVES OF ROOT AND TUBER VEGETABLES GROUP:

Sugar Beet Tops	39381	09/25/1975		Monsanto	OWN
	108159	10/14/1977	R.D. 141	Monsanto	OWN
Roundup Ready® Sugar Beets	44331601	07/11/1997	R.D. 1384	Monsanto	OWN
Carrot Tops	108159	10/14/1977	R.D. 141	Monsanto	OWN

171-4(k,l) BULB VEGETABLE GROUP:

Onions, Leeks, Garlic	40783101	08/08/1988	3205, -06, -07	IR-4	PER
-----------------------	----------	------------	----------------	------	-----

171-4(k,l) LEAFY VEGETABLES (EXCEPT BRASSICA VEGETABLES) GROUP:

Celery	40578001		3209	IR-4	PER
Spinach	40578002		3208	IR-4	PER
Lettuce	108159	10/14/1977	R.D. 141	Monsanto	OWN

171-4(k,l) BRASSICA LEAFY VEGETABLES GROUP:

Cabbage	108159	10/14/1977	R.D. 141	Monsanto	OWN
Broccoli	40802801	08/18/1988	3210	IR-4	PER
Mustard Greens	40802802	08/18/1988	3211	IR-4	PER

171-4(k,l) LEGUME VEGETABLES GROUP:

Dried Beans	108159	10/14/1977	R.D. 141	Monsanto	OWN
	44837501	05/21/1999	R.D. 1481	Monsanto	OWN

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			44837502	05/21/1999	R.D. 1481	Monsanto	OWN
	Lentils						
	Peas		108159	10/14/1977	R.D. 141	Monsanto	OWN
	Peas (dry)		44407501		6139	IR-4	PER
	Peas (import)		43807201	09/27/1995	R.D. 1312	Monsanto	OWN
			42312804	05/01/1992	R.D. 1092	Monsanto	OWN
	Dry Beans - Canada		44837501	05/20/1999	R.D. 1481	Monsanto	OWN
			44837502	05/20/1999	R.D. 1481	Monsanto	OWN
	Snap Beans		108159	10/14/1977	R.D. 141	Monsanto	OWN
	Soybeans/Soybean Processing Commodities		123953	11/12/1973	R.D. 47	Monsanto	OWN
			38908	07/12/1974	R.D. 51	Monsanto	OWN
			33954	12/19/1975	R.D. 86	Monsanto	OWN
			61555	03/01/1976	R.D. 92	Monsanto	OWN
			108153	06/17/1977	R.D. 132	Monsanto	OWN
			24503	12/12/1977	R.D. 145	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			84936	10/21/1981	R.D. 380	Monsanto	OWN
			156793	02/21/1986	R.D. 617	Monsanto	OWN
			43260401	05/27/1994	R.D. 1232	Monsanto	OWN
			43260402	05/27/1994	R.D. 1232	Monsanto	OWN
			43260403	05/27/1994	R.D. 1232	Monsanto	OWN

171-4(k,l) FOLIAGE OF LEGUME VEGETABLES GROUP:

Bean Vines and Hay							
Lentil Forage and Hay							
Soybean Forage and Hay			123953	11/12/1973	R.D. 47	Monsanto	OWN
			38908	07/12/1974	R.D. 51	Monsanto	OWN

16400387

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			33954	12/19/1975	R.D. 86	Monsanto	OWN
			61555	03/01/1976	R.D. 92	Monsanto	OWN
			108153	06/17/1977	R.D. 132	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			84936	10/21/1981	R.D. 380	Monsanto	OWN
			156793	02/21/1986	R.D. 617	Monsanto	OWN

171-4(k,l) FRUITING VEGETABLES (EXCEPT CURCUBITS) GROUP:

171-4(k,l) CURCUBITS VEGETABLES GROUP

171-4(k,l) CITRUS FRUITS GROUP:

Citrus/Citrus Processed Commodities

44496	01/19/1976	R.D. 88	Monsanto	OWN
39142	01/19/1976	R.D. 89	Monsanto	OWN
40159401	04/10/1987	R.D. 766	Monsanto	OWN

171-4(k,l) POME FRUITS GROUP:

108129	09/01/1976	R.D. 108	Monsanto	OWN
108186	09/01/1976	R.D. 107	Monsanto	OWN

171-4(k,l) STONE FRUITS GROUP:

Plums

40785301	07/29/1988	R.D. 878	Monsanto	OWN
43315701	07/19/1994	R.D. 1236	Monsanto	OWN

171-4(k,l) SMALL FRUITS AND BERRIES GROUP:

Blackberries

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	Blueberries						
	Cranberries		53002	09/10/1980	R.D. 314	IR-4	PER
			40779101	08/02/1988	3505	IR-4	PER
	Grapes/Raisins		38770	10/04/1974	R.D. 53	Monsanto	OWN
			108132	12/31/1976	R.D. 118	Monsanto	OWN
			40785303	07/29/1988	R.D. 878	Monsanto	OWN
			43315702	07/19/1994	R.D. 1236	Monsanto	OWN
	Raspberries						
	Strawberries						
171-4(k,l) TREE NUTS:							
	Almond, Almond Hulls, Macadamia, Pecan, Walnut		111945	11/30/1976	R.D. 109	Monsanto	OWN
			42155301	01/03/1992	R.D. 1043	Monsanto	OWN
			42155302	01/03/1992	R.D. 1043	Monsanto	OWN
171-4(k,l) CEREAL GRAINS GROUP:							
	Barley		38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
	Barley (import)		42312801	05/01/1992	R.D. 1092	Monsanto	OWN
			42312802	05/01/1992	R.D. 1092	Monsanto	OWN
			43807202	09/27/1995	R.D. 1312	Monsanto	OWN
			43827802	09/27/1995	R.D. 1312	Monsanto	OWN
			43845401	09/27/1995	R.D. 1312	Monsanto	OWN
	Corn Grain		123953	11/12/1973	R.D. 47	Monsanto	OWN
			38908	07/12/1974	R.D. 51	Monsanto	OWN
			48284	05/15/1975	R.D. 80	Monsanto	OWN

1660-0187

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			49054	12/19/1975	R.D. 85	Monsanto	OWN
			23336	12/12/1977	R.D. 144	Monsanto	OWN
			23268	12/12/1977	R.D. 150	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			37687	03/30/1979	R.D. 231	Monsanto	OWN
			130807	10/12/1983	R.D. 486	Monsanto	OWN
			40502602	01/29/1988	R.D. 848	Monsanto	OWN
			43655701	05/19/1995	R.D. 1237	Monsanto	OWN
			45066901	03/16/2000	R.D. 1501	Monsanto	OWN
	Roundup Ready® Corn		43712702	06/29/1995	R.D. 1306	Monsanto	OWN
			44531301	04/02/1998	R.D. 1409	Monsanto	OWN
			45077401	03/23/2000	R.D. 1502	Monsanto	OWN
	Corn Oil/Corn Milled Products		40502604	01/29/1988	R.D. 848	Monsanto	OWN
			41478101	04/02/1990	R.D. 978	Monsanto	OWN
			43655702	05/19/1995	R.D. 1237	Monsanto	OWN
	Oat Grain		38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
	Oats / Processed Oats (Preharvest Import Tolerance)		43870201	11/16/1995	R.D. 1326	Monsanto	OWN
			43870202	11/16/1995	R.D. 1326	Monsanto	OWN
			43870203	11/16/1995	R.D. 1326	Monsanto	OWN
			43870204	11/16/1995	R.D. 1326	Monsanto	OWN
			43927401	11/16/1995	R.D. 1326	Monsanto	OWN
			43927402	11/16/1995	R.D. 1326	Monsanto	OWN
	Rice Grain		38908	07/12/1974	R.D. 51	Monsanto	OWN
	Sorghum Grain		38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			109271	04/09/1982	R.D. 410	Monsanto	OWN
			103375	06/04/1982	R.D. 423	Monsanto	OWN

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

Page 23 of 33

16700187

503

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			130807	10/12/1983	R.D. 486	Monsanto	OWN
			144722	10/10/1984	R.D. 555	Monsanto	OWN
			40502601	01/29/1988	R.D. 849	Monsanto	OWN
			43342001	08/15/1994	R.D. 1192	Monsanto	OWN
			44646601	09/01/1998	R.D. 1434	Monsanto	OWN
	Grain Sorghum Processed Products		40502603	01/29/1988	R.D. 849	Monsanto	OWN
			41472001	04/02/1990	R.D. 977	Monsanto	OWN
			43342002	08/15/1994	R.D. 1192	Monsanto	OWN
	Wheat Grain		123953	11/12/1973	R.D. 47	Monsanto	OWN
			38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			122715	12/02/1982	R.D. 460	Monsanto	OWN
			150835	11/13/1984	R.D. 561	Monsanto	OWN
			41484301	04/16/1990	R.D. 983	Monsanto	OWN
	Roundup Ready® Wheat		45174701	07/19/2000	R.D. 1512	Monsanto	OWN
	Wheat Milled Products		150835	11/13/1984	R.D. 561	Monsanto	OWN

171-4(k,l) FORAGE, FODDER, AND STRAW OF CEREAL GRAINS GROUP:

Barley Forage, Hay, and Straw	38908	07/12/1974	R.D. 51	Monsanto	OWN
	108203	07/06/1978	R.D. 187	Monsanto	OWN
Corn Forage, Silage, and Fodder	123953	11/12/1973	R.D. 47	Monsanto	OWN
	38908	07/12/1974	R.D. 51	Monsanto	OWN
	49054	12/19/1975	R.D. 85	Monsanto	OWN
	48284	05/15/1975	R.D. 80	Monsanto	OWN
	23336	12/12/1977	R.D. 144	Monsanto	OWN
	23268	12/12/1977	R.D. 150	Monsanto	OWN

NR: See Appendix E for Explanation
of Non-Required Data

Contains Trade Secret or Otherwise Confidential Information of Monsanto Company

16800187

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxxRESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			37687	03/30/1979	R.D. 231	Monsanto	OWN
			130807	10/12/1983	R.D. 486	Monsanto	OWN
			40502602	01/29/1988	R.D. 848	Monsanto	OWN
			43655701	05/19/1995	R.D. 1237	Monsanto	OWN
			43712702	06/29/1995	R.D. 1306	Monsanto	OWN
			45066901	03/16/2000	R.D. 1501	Monsanto	OWN
			45077401	03/23/2000	R.D. 1502	Monsanto	OWN
	Oat Forage, Hay, and Straw		38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
	Rice Straw		38908	07/12/1974	R.D. 51	Monsanto	OWN
	Sorghum Forage, Fodder, Silage, and Hay		38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			109271	04/09/1982	R.D. 410	Monsanto	OWN
			103375	06/04/1982	R.D. 423	Monsanto	OWN
			130807	10/12/1983	R.D. 486	Monsanto	OWN
			144722	10/10/1984	R.D. 555	Monsanto	OWN
			40502601	01/29/1988	R.D. 849	Monsanto	OWN
	Wheat Forage, Hay, and Straw		123953	11/12/1973	R.D. 47	Monsanto	OWN
			38908	07/12/1974	R.D. 51	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			122715	12/02/1982	R.D. 460	Monsanto	OWN
			150835	11/13/1984	R.D. 561	Monsanto	OWN
			41484301	04/16/1990	R.D. 983	Monsanto	OWN
			45174701	07/19/2000	R.D. 1512	Monsanto	OWN
171-4(k,l)	GRASS FORAGE, FODDER, AND HAY GROUP:		108147	04/28/1978	R.D. 175	Monsanto	OWN
			53004	09/12/1980	R.D. 313	Monsanto	OWN

1630-0187

505

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
			76805	05/08/1981	R.D. 359	Monsanto	OWN
			45089401	03/27/2000	R.D. 1494	Monsanto	OWN
171-4(k,l) NONGRASS ANIMAL FEEDS GROUP:							
	Allalla Seed and Hay		108133	12/31/1976	R.D. 117	Monsanto	OWN
	Clover, trefoil, lespedeza		108147	04/28/1978	R.D. 175	Monsanto	OWN
			53004	09/12/1980	R.D. 313	Monsanto	OWN
			76805	05/08/1981	R.D. 359	Monsanto	OWN
			40541304	02/23/1988	R.D. 856	Monsanto	OWN
			43077001	12/16/1993	R.D. 1190	Monsanto	OWN
			45365401	03/21/2001	R.D. 1531	Monsanto	OWN
171-4(k,l) MISCELLANEOUS COMMODITIES							
	Acerola						
	Asparagus		108144	02/17/1978	R.D. 157	Monsanto	OWN
			40642401	04/04/1988	3212	IR-4	PER
	Avocados		108149	11/15/1977	R.D. 147	Monsanto	OWN
			108164	07/07/1978	R.D. 189	Monsanto	OWN
	Bananas (including Plantains)		108175	06/14/1979	R.D. 244	Monsanto	OWN
	Breadfruit		41049401	1989	3474	IR-4	PER
	Canistel		41049401	1989	3474	IR-4	PER
	Canola /Oilseed Rape / Processing		42312803	05/01/1992	R.D. 1092	Monsanto	OWN
			43807203	09/27/1995	R.D. 1312	Monsanto	OWN
	Roundup Ready® Canola		44528801	04/03/1998	R.D. 1408	Monsanto	OWN
			44528802	04/03/1998	R.D. 1408	Monsanto	OWN
			44528803	04/03/1998	R.D. 1408	Monsanto	OWN
			44528804	04/03/1998	R.D. 1408	Monsanto	OWN
	Coconut, Coconut Oil			03/09/1982	R.D. 411	Monsanto	OWN

17000287

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	Coffee		51981	06/01/1976	R.D. 102	Monsanto	OWN
	Cottonseed		123953	11/12/1973	R.D. 47	Monsanto	OWN
			61553	03/01/1976	R.D. 92	Monsanto	OWN
			108176	05/17/1976	R.D. 100	Monsanto	OWN
			108153	06/17/1977	R.D. 132	Monsanto	OWN
			108203	07/06/1978	R.D. 187	Monsanto	OWN
			60103	11/03/1980	R.D. 322	Monsanto	OWN
	Cotton Forage and Hay		123953	11/12/1973	R.D. 47	Monsanto	OWN
			61553	03/01/1976	R.D. 92	Monsanto	OWN
			108163	05/17/1976	R.D. 100	Monsanto	OWN
			60103	11/03/1980	R.D. 322	Monsanto	OWN
	Cotton Processing Fractions		61555	03/01/1976	R.D. 92	Monsanto	OWN
	Roundup Ready® Cotton		43571801	03/06/1995	R.D. 1297	Monsanto	OWN
	Dates		41049401	1989	3474	IR-4	PER
	Guava		59050	11/19/1980		IR-4	PER
	Jackfruit		41049401	1989	3474	IR-4	PER
	Jabotica		41049401	1989	3474	IR-4	PER
	Kiwi Fruit						
	Mangos		40580401	04/04/1988	3213	IR-4	PER
	Oil Seeds (Flax, Mustard, Rape, Sunflower)			11/26/1979	R.D. 278	Monsanto	OWN
	Oil Seed Rape / Canola (Import)		43827801	09/27/1995	R.D. 1312	Monsanto	OWN
			43807203	09/27/1995	R.D. 1312	Monsanto	OWN
	Olives, Processed		108175	06/14/1979	R.D. 244	Monsanto	OWN
			42398401	07/08/1992	R.D. 1115	Monsanto	OWN
	Olive Oil		108175	06/14/1979	R.D. 244	Monsanto	OWN
			42398401	07/08/1992	R.D. 1115	Monsanto	OWN
	Palm Oils			08/02/1976	R.D. 106	Monsanto	OWN
	Papayas		63713	11/20/1980	?	Monsanto	OWN

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxx

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
	Peanuts/Peanut Forage and Hay		28856	02/18/1980	R.D. 289	Monsanto	OWN
			144341	09/12/1984	R.D. 552	Monsanto	OWN
			40750702	06/20/1988	R.D. 875	Monsanto	OWN
	Peanut Processed Commodities		144341	09/12/1984	R.D. 552	Monsanto	OWN
			40750702	06/20/1988	R.D. 875	Monsanto	OWN
	Pineapple		43824301	10/18/1995	R.D. 1325	IR-4	PER
			43824302	10/18/1995	R.D. 1325	IR-4	PER
	Pistachio Nuts		111945	11/30/1976	R.D. 110	Monsanto	OWN
	Sapote		41049401	1989	3474	IR-4	PER
	Soursop		41049401	1989	3474	IR-4	PER
	Sugarcane		61558	03/01/1976	R.D. 93	Monsanto	OWN
			108140	06/21/1976	R.D. 104	Monsanto	OWN
			136876	03/01/1978	R.D. 163	Monsanto	OWN
			108168	08/25/1978	R.D. 197	Monsanto	OWN
	Sugarcane Processed Commodities		108140	06/21/1976	R.D. 104	Monsanto	OWN
	Tea, Instant Tea		78823	06/30/1981	R.D. 369	Monsanto	OWN

17260187

RESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)RESIDUE
CHEMISTRY
APPENDIX C

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

MAGNITUDE OF THE RESIDUE: POTABLE WATER

171-4(f)	Canals		39381	09/25/1975		Public Doc. 1	PL
			36224	09/25/1975		Monsanto	OWN
	Flooded Levees		39381	09/25/1975		Monsanto	OWN
			36224	09/25/1975		Monsanto	OWN
	Ponds		39381	09/25/1975		Public Doc.2	PL
			36224	09/25/1975		Monsanto	OWN
	Potable Water Treatment		36224	09/25/1975		Monsanto	OWN
	Ditchbank / Flowing Water		108173	12/22/1978		Monsanto	OWN
	Shoreline / Impounded Water		108173	12/22/1978		Monsanto	OWN
	Total Area / Impounded Water		108173	12/22/1978		Monsanto	OWN
	Whole Cross-Section / Flowing Water		77238	06/29/1981		Monsanto	OWN
	1 R.D. Comes. USDA/ARS. Prosser, Washington.						
	2 R.D. Blackburn. WSDA/ARS. Fort Lauderdale, Florida.						

500

1730:02:87

Printed: 07/19/2001

Data Matrix: Glyphosate, MON 78623 58% Technical Solution, and MON 78270

EPA Reg. Nos.
524-421 / -LGE / -xxxRESIDUE
CHEMISTRY 40
CFR 158.240
(860 Series)RESIDUE
CHEMISTRY
APPENDIX D

NO.	STUDY NAME	DATA REQ'D	EPA MRID NUMBER	SUBMIT DATE	MONSANTO DOCUMENT NUMBER	SUBMITTER	STATUS
-----	------------	---------------	--------------------	----------------	--------------------------------	-----------	--------

MAGNITUDE OF THE RESIDUE FISH

171-4(g) ACCUMULATION STUDIES

Rainbow Trout

108173	12/22/1978	R.D. 200	Monsanto	OWN
36229	09/25/1975	?	Monsanto	OWN

Largemouth Bass

108173	12/22/1978	R.D. 200	Monsanto	OWN
36229	09/25/1975	?	Monsanto	OWN

Channel Catfish

108173	12/22/1978	R.D. 200	Monsanto	OWN
94971	02/26/1982	R.D. 407	Monsanto	OWN
36229	09/25/1975	?	Monsanto	OWN

Bluegill Sunfish

36229	09/25/1975	?	Monsanto	OWN
76491	11/12/1973	R.D. 47	Monsanto	OWN
41228301	09/05/1989	R.D. 955	Monsanto	OWN
41228302	09/05/1989	R.D. 955	Monsanto	OWN

Crayfish

108173	12/22/1978	R.D. 200	Monsanto	OWN
132170	06/15/1983	R.D. 478	Monsanto	OWN
155120	11/22/1985	R.D. 646	Monsanto	OWN

Mollusks

108173	12/22/1987	R.D. 200	Monsanto	OWN
128690	06/15/1983	R.D. 478	Monsanto	OWN
154311	11/22/1985	R.D. 646	Monsanto	OWN

171-4(g) 0287

No.	Study Name	EXPLANATION
APPENDIX B EXPLANATION OF DATA NOT REQUIRED TO SUPPORT REGISTRATION		
40 CFR 158.15-190 PRODUCT CHEMISTRY		
63-6	Boiling Point (TGA)	Data is required only if the technical material is a liquid at room temperature. Glyphosate is a solid.
63-18	Viscosity (MP)	Data is required if the material is a liquid. Glyphosate is a solid.
63-19	Miscibility (MP)	Data is required if the material is an emulsifiable liquid. Glyphosate is a water-soluble solid.
63-19	Miscibility (EP)	Data is required if the product is an emulsifiable liquid. Roundup herbicide is a ready-to-use liquid, not to be diluted.
63-21	Dielectric Breakdown Voltage (EP)	Data is required for liquid products that are used around electrical equipment. When Roundup is applied as a herbicide there is virtually no circumstance where it would be in contact with electrical equipment.
40 CFR 158.340 TOXICOLOGY		
81-3	Inhalation LC50 - Rat (MP & TGA)	Requirement waived by EPA on 1/5/88.
81-6	Dermal Sensitization (MP)	Data is required if repeated contact with human skin is expected. Glyphosate is not used in a manner where such contact is likely.
81-7	Acute Delayed Neurotoxicity - Hen (TGA)	Not required unless test material is an organophosphate, or a metabolite or degradation product which causes acetyl cholinesterase depression, or is structurally related to a substance that causes delayed neurotoxicity. Glyphosate does not trigger this.
82-3	90-Day Dermal (TGA)	Data are needed if product used for purposeful dermal application to, or prolonged exposure of, human skin; or if pesticidal use will result in comparable exposure (e.g., swimming pool) or if other study criteria are met. Glyphosate does not trigger this.
82-4	90-Day Inhalation - Rat (TGA)	Data is required if the use may result in repeated inhalation exposure at a concentration likely to be toxic. The use pattern for glyphosate does not warrant this testing.
82-5	90-Day Neurotoxicity - Hen (TGA)	Data is required if acute delayed neurotoxicity test showed neuropathy or neurotoxicity, or if closely related structurally to a compound which can induce these effects. Glyphosate does not cause acute neurotoxicity.
82-5	90-Day Neurotoxicity - Mammal (TGA)	Data is required if acute oral, dermal or inhalation studies showed neuropathy or neurotoxicity. Glyphosate does not trigger this testing.
86-1	Domestic Animal Safety	Required on a case-by-case basis. The known properties of glyphosate and the registered uses do not warrant this testing.
40 CFR 158.490 WILDLIFE AND AQUATIC ORGANISMS		

No.	Study Name	EXPLANATION
APPENDIX B		
EXPLANATION OF DATA NOT REQUIRED TO SUPPORT REGISTRATION		
71-3	Wild Mammal Toxicity (TGA)	Tests are required on a case-by-case basis depending on the results of lower tier studies such as acute and subacute testing, intended use pattern, and pertinent environmental properties. Results from other glyphosate studies have not triggered this.
71-5	Simulated and Actual Field Testing	Data are required on a case-by-case basis depending on the results of lower tier studies such as acute and subacute Mammals and Birds (TEP) testing, intended use pattern, and environmental properties. Results from other glyphosate studies do not trigger.
72-7	Simulated or Actual Field Testing - Aquatic Organisms (TEP)	Results of tier one and tier two studies with Roundup and glyphosate demonstrate that these materials have a low level of toxicity to aquatic species. Results from other studies have not triggered this requirement.
40 CFR 158.540 PLANT PROTECTION		
121-1	Target Area Phytotoxicity (TEP)	Data are required only for Special Review and certain public health situations.
123-1	Tier II Seed Germination / Seedling Emergence (TGA)	Required if >25% detrimental effect in one or more plant species was found in the corresponding Tier I test. Glyphosate does not trigger this requirement.
124-1	Tier III Terrestrial Field (TEP)	Required if >25% detrimental effect in one or more plant species was found in the corresponding Tier II test. Glyphosate does not trigger this requirement.
124-2	Tier III Aquatic Field (TEP)	Required if >50% detrimental effect on any plant species was found in the corresponding Tier II test. Glyphosate does not trigger this requirement.
40 CFR 158.590 NONTARGET INSECT		
141-2	Honeybee - Toxicity of Residues on Foliage (TEP)	As data from acute study indicate very low toxicity, no further testing is required.
151-5	Field Testing for Pollinators (TEP)	As data from acute study indicate very low toxicity, no further testing is required.
40 CFR 158.390 REENTRY PROTECTION		
132-1 through 133-4		Glyphosate is applied to undesirable grass and broadleaf weeds to control or otherwise mitigate their growth or competition with crops, turf or ornamentals. It is unlikely that people would contact such treated vegetation on a regular or extended basis.
40 CFR 158.290 ENVIRONMENTAL FATE		
161-4	Photodegradation in Air (TGA or PAIRA)	Waived by the Agency on May 15, 1992.
162-2	Anaerobic Soil (TGA or PAIRA)	Not required if anaerobic aquatic metabolism study has been conducted.
163-2	Volatility - Lab (TEP)	Waived by the Agency on May 15, 1992.
163-3	Volatility - Field (TEP)	Waived by the Agency on May 15, 1992.

17600187

510

No.	Study Name	EXPLANATION
APPENDIX E		
EXPLANATION OF DATA NOT REQUIRED TO SUPPORT REGISTRATION		
164-4	Combination and Tank Mixes	The Agency has not requested any specific studies. However, glyphosate tank mix residue data are available under the 40 CFR 158.240 Residue Data section of this data package.
164-5	Soil Dissipation, Long-Term (TEP)	Required if pesticide residues do not dissipate readily in soil. Glyphosate has a sufficiently short half-life in soil that this study has not been required.
40 CFR 158.240		
RESIDUE CHEMISTRY		
171-4	Food Handling (EP)	Data on residues in food or feed in food handling establishments are required whenever a pesticide is to be used in food/feed handling establishments. Glyphosate end-use products are not used in such establishments.
171-5	Reduction of Residue	Reduction of residue is required when the assumption of tolerance level residues results in an unsafe level of exposure. The registered uses of glyphosate do not trigger this requirement.

177000287



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 21 2002

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mr. Stephen J. Wratten
Monsanto Company
600 13th Street, NW, Suite 660
Washington, DC 20005

Dear Mr. Wratten:

Subject: MON 78270 Herbicide
EPA File Symbol 524-LGT
Your Letters Dated September 5, 2001 and January 21, 2002

The scientific review and evaluation of the information submitted in support of the above product have been completed. This product is not acceptable for registration at this time. The following are a summary of conclusions and/or comments. Copies of reviews are enclosed for your records.

1. The product chemistry data submitted corresponding to guideline reference 830 Series Subgroup A and Subgroup B (Physical/ Chemical properties) satisfy the data requirements of 40 CFR 158.150 to 158.190 are acceptable, except for the one-year storage stability (830.6317), corrosion characteristics (830.6320), and the CSF for the basic formulation.

2. The CSF dated 9/5/01 is not acceptable for the following reasons:

a. The names of the inert ingredients are not included in the proper column (#10) of the CSF. The names of all ingredients used in the formulation must be inserted into column #10 of the CSF. Column #11 is only for Suppliers name and address.

c. Three inert ingredients do not appear to be cleared by the Agency. In the data submitted for these inert ingredients, the chemical names do not match with the CAS number provided. Additional information is needed. Refer to confidential appendix of the enclosed product chemistry review for details.

3. Submission of the one year storage stability (830.6317) and corrosion characteristics (830.6320) studies will be required as a condition of registration.

4. Comment 2a was addressed by the revised CSFs dated 1/21/02. A revised CSF must be submitted addressing comments 2b and 2c, prior to registration.

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

514

5. The acute toxicology data submitted are acceptable and place this product in toxicity category III for acute inhalation, primary eye irritation, and primary skin irritation and category IV for acute oral and acute dermal toxicity. This product is not a dermal sensitizer. The 30% dilution primary skin irritation study is acceptable.

6. Under the Personnel Protective Equipment on both pages 6 and 87, delete the following statement.

-Applicators, when handling a spray solution whose concentration is 30% of this product or less, must wear the above PPE, except that gloves are required during application.--

7. This product requires Child Resistant Packaging since the acute inhalation LC_{50} for both male and female rats is between 0.77 mg/L and 2.21 mg/L (observed) and there are residential uses on the label. Submit a certification statement certifying that this product is packaged in child resistant packaging.

Further action will await resolvment of above comments, registration of EPA Registration No. 524-LGE, and inclusion of the potassium salt into the glyphosate tolerance expression.

Sincerely,

James A. Tompkins
James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

1. 123 PUBLIC CASE # - NEEDED		4. PETITION NO.		5. RECEIVED BY TEAM	
6. METHOD OF SUPPORT		7. PRODUCT MANAGER		8. PROJECTED RETURN	
9. DATE FILLED		10. ACTION TYPE		11. DATE SUPPLYING DATE	
3/8/02 3/12/02 AWP		Write up Review Label Review		03/12/02	
12. REVIEW TYPE	13. REVIEWER CODE (Initials)	14. SIGNATURE OF REVIEWER	15. COMMENT CODE	16. DATE REVIEW COMPLETED	
A. REVIEWABILITY TEAM					
B. PRODUCT MANAGER TEAM EFFICACY REVIEW					
C. PRODUCT MANAGER TEAM HUMAN SAFETY REVIEW					
D. PRODUCT MANAGER TEAM ENVIRONMENTAL SAFETY REVIEW					
E. PRODUCT MANAGER TEAM REASONING REVIEW					
F. PRODUCT MANAGER					
G. INTERAGENCY REFERENCE		Ukw		03	12 012
H. COST-BENEFIT REVIEW		Need Revised CSF			
I. PUBLIC COMMENT REVIEW		Minor Label Changes			
J. EEC BRANCH - IDENTIFYING EFFICACY		most of Label ok			
K. EEC BRANCH - IDENTIFYING EFFICACY					
L. EEC BRANCH - IDENTIFYING EFFICACY					
M. EEC BRANCH - IDENTIFYING EFFICACY					
N. EEC BRANCH - IDENTIFYING EFFICACY					
O. EEC BRANCH - IDENTIFYING EFFICACY					
P. EEC BRANCH - IDENTIFYING EFFICACY					
Q. EEC BRANCH - IDENTIFYING EFFICACY					
R. EEC BRANCH - IDENTIFYING EFFICACY					
S.					
T.					
PRODUCT MANAGER SIGNATURE			TYPE OF RESPONSE		CODE

MONSANTO



B

MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 660
WASHINGTON, D.C. 20005
PHONE (202) 783-2460
FAX (202) 783-2468
<http://www.monsanto.com>

January 11, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U.S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

Attention: Mr. James A. Tompkins
Team Leader (25)

Subject: MON 78270 Herbicide (EPA File Symbol 524-LGT)
Amended Label Text for Review

0000
0000
0000

Dear Mr. Tompkins:

Monsanto has filed an application dated 5-Sep-2001 to register the new herbicide product named above, based on the potassium salt of glyphosate as the active ingredient. On 12-Dec-2001, Monsanto met with the Agency to discuss certain issues in advance of the final review process for this and several other pending potassium glyphosate formulations. EPA offered several suggestions pertaining to formatting and text preferences in labels. Monsanto now submits a modified version of the MON 78270 herbicide label incorporating those changes. One MARKED and three UNMARKED copies are provided. We request that this newer label be reviewed for approval in place of the version submitted with the original application.

Minor inconsequential changes between the present and the original versions concerning formatting, grammar, spelling improvements are not highlighted. Only changes that could have material impact on the Directions for Use are identified in the MARKED copy. None of these involve differences in application rates, timing, or use sites.

The chief changes are the following:

- Deletion of the words "hot line number" from the First Aid box in Section I.3.1 and III.3.1. Monsanto health and safety staff felt that this was an inappropriate identifier, since the phone number provided goes first to Monsanto Security or Customer Response, who then refer exposure calls to a poison control center; this was not viewed as a true "hot line" system.

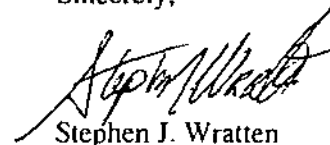
11-Jan-02

- Modification of the glove statement in the PPE Sections and Agricultural Use boxes of both main labels to refer to EPA Category A and an 8-mil thickness, as we discussed on 12-Dec.
- Deletion of the toxicology, volatility, and environmental fate information from General Information Section I.5.0 and III.5.0, as EPA has specified in recent reviews of other labels.
- Inclusion of a cross reference chart in Section I.6.0 of the crop label to aid users in understanding the relative volumes of MON 78270 herbicide for an equal acid equivalent rate compared to products about which they are familiar. A similar chart was judged favorably by users when Roundup UltraMAX was introduced, and Monsanto believes it helps remind users to use lower product volumes when mixing spray solutions.
- Include a reference to both state and county-specific labeling (ie, Fresno County) on page 13 of 120 at the request of CDPR.
- Remove California reminder statement on tank mix partners at several locations. CDPR now believes the overarching statement on page 2 of 120 is sufficient.
- Add advisory language (p. 26 of 120) concerning the potential for weed control antagonism when tank mixtures burn foliage before glyphosate can be adsorbed.
- Add increased cautionary language (p. 28 – 30 of 120) for growers of vegetable crops who use selective equipment or plastic mulch in order to help prevent crop injury.
- Although not MARKED, the water gallonage column in Section I.15.0 was deleted in favor of the single 3rd paragraph sentence; nearly all tabular entries had previously recommended 3 – 40 gallons, so the same information could be communicated more simply as shown.
- Rename the co-herbicide in Section II.D (Supplemental label for Tank Mixing) to "Aim[®]" rather than "MON 46598". This label was initially used in a market test, and is now considered fully commercialized; the composition of the partner product remains the same but now we wish to use the commercial brand name.
- Reformat the crop aerial restrictions in Section II.F pertaining to maximum rate limitations in California into tabular form. These limits are to reduce drift potential, and are crop specific.
- Include Sections II.O and II.P, thereby adding via Supplemental Labeling the opportunity to permit surfactant tank mix additions at high gallonage and low use rates when surfactant from the product will be very dilute. These labels will be considered "otherwise directed" in reference to the surfactant statement in Section I.5.0, paragraph 2.

Monsanto appreciates the opportunity to make these label revision now before approval, so that production of final printed labeling can be streamlined when approval occurs this spring.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,


Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 78270 Amend.doc



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OPP Identifier Number

287932

Application for Pesticide - Section I

1. Company/Product Number 524-LGT	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) MON 78270 Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Amended label text for review

Section - III

1. Material This Product Will Be Packaged In:			
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Unit Packaging wgt. _____ No. per container _____	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No If "Yes" Package wgt _____ No. per container _____	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted			
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container	4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled		<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)			
Name Dr. Marsha Gray	Title Registration Manager	Telephone No. (Include Area Code) (202) 783-2460	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.			8. Date Application Received (Stamped)
2. Signature 	3. Title Manager, Registrations		
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date January 11, 2002		

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions; searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on x 11 inch paper for submission.

Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. **Company/Product Number** - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. **EPA Product Manager** - If known, fill in the name and PM number of the EPA Product Manager.
3. **Proposed Classification** - Specify the proposed classification of this product.
4. **Product Name** - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. **Name and Address of Applicant** - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. **Expedited Review** - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. **Subject of submission** - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. **Type of Packaging** - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. **Type of Retail Container** - Indicate type of container in which product will be marketed.
3. **Location of Net Contents** - Indicate the location of the net contents information for your product.
4. **Size(s) of Retail Container** - Specify the net contents of all retail containers for your product.
5. **Location of Use Directions** - Indicate the location of the use directions for your product.
6. **Manner in which label is affixed to product** - Indicated the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

- 1-5. Self-explanatory.
6. EPA Use Only.

MONSANTO



MONSANTO COMPANY
600 13TH STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20005
PHONE (202) 783-2400
FAX (202) 783-2468
<http://www.monsanto.com>

Jan. 21, 2002

Document Processing Center (AMEND)
Office of Pesticide Programs (7504C)
U. S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

*CSF not acceptable
must match cleared*

Attention: Mr. James A. Tompkins
Team Leader (25)

**Subject: MON 78270 Herbicide (EPA File Symbol 524-LGT)
Amended Confidential Statements of Formula**

Dear Mr. Tompkins:

At our meeting on 12-Dec-2001, the Agency provided Monsanto with further direction on structuring CSF entries for minor ingredients that may or may not always be included in a product. Specifically, we learned that a [REDACTED] Lower Certified Limit (LCL) was not as acceptable as establishing alternate versions of that CSF with and without the ingredient.

I have implemented that direction on the enclosed CSFs related to our pending registration for the above-mentioned End Use Product containing potassium glyphosate. I enclose two copies each of one basic and one alternate CSF for Agency review and approval. These CSFs contain the same ingredients in the same levels as requested in our original Sept-2001 product application file, and differ only by proposing two versions, one with and one without two specific minor components. I emphasize that the testing associated with the product application was conducted with these components present as in the Basic version, so their removal in the Alternate version should not be cause for

521

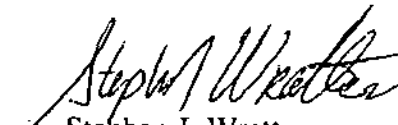
concern. Through this action, Monsanto seeks to ensure against any last minute difficulties that could delay the final approval.

Note that both CSFs still list [REDACTED] LCLs for an unintentional contaminant that could be present occasionally at low levels but ordinarily would be absent.

When approved, the enclosed basic and alternate CSFs will supercede the earlier proposal submitted with the original product application.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,


Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

MON 78270 Revised CSFs.doc

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

5002



United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☒ Amendment
☐ Other

OPP Identifier Number

287936

Application for Pesticide - Section I

1. Company/Product Number. 524-LGT	2. EPA Product Manager Mr. James Tompkins	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) MON 78270 Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____

Section - II

<input checked="" type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Amended Confidential Statement of Formula

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	
				<input type="checkbox"/> Plastic	
				<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)					
Name Dr. Marsha Gray		Title Registration Manager		Telephone No. (Include Area Code) (202) 783-2460	
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.					8. Date Application Received (Stamped) <div style="text-align: right;">572</div>
2. Signature 		3. Title Manager, Registrations			
4. Typed Name Stephen J. Wratten, Ph.D.		5. Date January 21, 2002			

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, and use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the following material must accompany the application:

1. Certification with Respect to Citation of Data (EPA Form 8570-29); [if not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling: Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 11 inch paper for submission.

Submission of Data: Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.

Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

Company/Product Number - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.

EPA Product Manager - If known, fill in the name and PM number of the EPA Product Manager.

Proposed Classification - Specify the proposed classification of this product.

Product Name - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only.

Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.

Name and Address of Applicant - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.

Expedited Review - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registration, that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

Subject of submission - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "final label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

Type of Packaging - Check the appropriate block if your product will be packaged in the indicated packaging types.

Indicate the size of the individual packets and number per retail container.

Type of Retail Container - Indicate type of container in which product will be marketed.

Location of Net Contents - Indicate the location of the net contents information for your product.

Size(s) of Retail Container - Specify the net contents of all retail containers for your product.

Location of Use Directions - Indicate the location of the use directions for your product.

Manner in which label is affixed to product - Indicate the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, submission, "me-too," reregistration, etc.

5. Self-explanatory.

EPA Use Only.

DATE OUT: 14/JAN/2002

SUBJECT: PRODUCT CHEMISTRY REVIEW OF MP [] EP [X]
DP BARCODE No.: D278541 REG./File Symbol No.: 524-LGT
PRODUCT NAME: MON 78270 Herbicide

FROM: Shyam Mathur, Chemist
Product Chemistry Team
Technical Review Branch/RD (7505C)

S. Mathur
01-14-02

TO: Jim Tompkins, PM 25
Herbicide Branch/RD(7505C)

INTRODUCTION:

The registrant has submitted product chemistry data to support the registration of the subject end-use product. The product chemistry data were submitted under MRID No. 455038-01. The source of the AI MON 78623 58% Technical solution (EPA File Symbol No. 524-LGE, Glyphosate K salt) is under process of registration with the Agency. The registrant has also indicated the presence of N-Nitroso-glyphosate (NNG) with upper limit of 1 ppm.

SUMMARY OF FINDINGS

1. The subject product contains MON 78623 58% Technical solution (EPA File Symbol No. 524-LGE, Glyphosate Potassium salt 58%) as the active ingredient with product label claim of 48.8%.
2. The CSF for the basic formulation (dated 09-05-01) is filled out correctly and completely. It is in compliance with PR Notice 91-2 and agree with the label claim nominal concentration. However the data submitted corresponding to the guideline reference 830.1550 (Product Identity) and 830.1750 (Certified limits) do not satisfy the data requirements of 40CFR§158.155 and 158.175 respectively, since the registrant has proposed [REDACTED] values for the lower certified limits for two inert ingredients. The intentionally added inert ingredients can not have [REDACTED] lower certified limits.
3. The data submitted corresponding to the guideline reference 830.1650 (Description of formulation process) and 830.1670 (Discussion on the formation of impurities) satisfy the data requirements of 40CFR158.165 and 158.167 respectively.
4. The data submitted corresponding to guideline reference 830.1700 (Preliminary analysis) satisfy the data requirements of 40CFR §158.170.
5. The data submitted corresponding to the guideline reference 830.1800 (Enforcement of analytical method) satisfy the data requirements of 40CFR§158.180.

SUBJECT: PRODUCT CHEMISTRY REVIEW OF MP [] EP [X]
 DP BARCODE No.: D278541 REG./File Symbol No.: 524-LGT
 PRODUCT NAME: MON 78270 Herbicide

6. The data submitted corresponding to guideline reference color (830.6302), odor (830.6304), Physical state (830.6303), density (830.7300), pH (830.7000), Oxidation/Reduction (830.6314), Flammability (830.6315), Explodability (830.6316), Viscosity (830.7100), Miscibility (830.6319), and Dielectric breakdown voltage (830.6321) satisfy the data requirements of 40CFR§158.190

7. The registrant has stated that one year storage stability (830.6317) and corrosion characteristics (830.6320) under warehouse conditions and stored in commercial packaging will be initiated.

CONCLUSIONS:

The TRB has reviewed the product chemistry data submitted for the subject end-use product and has concluded that:

1. The product chemistry data submitted corresponding to guideline reference 830 Series Subgroup A and Subgroup B (Physical/Chemical properties) satisfy the data requirements of 40CFR§158.150 to 158.190 and are acceptable, except for one year storage stability (830.6317), corrosion characteristics (830.6320), and CSF for basic formulation.

2. The CSF for basic formulation (dated 09-05-01) is filled out completely and is in compliance with PR Notice 91-2. The nominal concentration of the AI concurs with the product label claim. The CSF for basic formulation is not acceptable for following reasons:

(A). The registrant has proposed [REDACTED] values for lower certified limits in cases of two intentionally added inert ingredients. The intentionally added inert ingredients can not have [REDACTED] LCL. *addressed CSF dated 1/21/02*

(B). The names of the inert ingredients are not included in the proper column (#10) of the CSF. The registrant must insert the names of all the ingredients used in the formulation in the Column # 10 of the CSF. The Column # 11 is only for Suppliers name & Address for all the ingredients. *Not addressed in 1/21/02 CSF*

(C). Three inert ingredients used in the formulation are not cleared by the Agency. The registrant must provide chemical composition of these ingredients which must include the chemical names, CAS numbers and percentages of each component of these inert ingredients. For the names of uncleared inert ingredients, please refer to Confidential Appendix. *Not addressed in 1/21/02*

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

PRODUCT CHEMISTRY REVIEW OF MP ☐ EP ☒

DP BARCODE No.: D278541 REG./File Symbol No.: 524-LGT

PRODUCT NAME: MON 78270 Herbicide

3. The results of one year storage stability (830.6317) and corrosion characteristics (830.6320) studies must be submitted to the Agency on completion.

4. The registration of the end-use product MON 78270 Herbicide is subject to the approval and registration of the source of the active ingredient, MON 78623 58% Technical solution (File Symbol No. 524-LGE) by the Agency.

PRODUCT CHEMISTRY REVIEW OF MP ☐ EP ☒

DP BARCODE No.: D278541 REG./File Symbol No.: 524-LGT

PRODUCT NAME: MON 78270 Herbicide

DATE: 01-14-02

1. Reviewer: S.B. Mathur 2. Company: Monsanto Technology LLC
3. Type of Submission: Registration ☒ Reregistration ☐
 New ☒ Resubmission ☒ Amendment ☐ "ME-TOO" ☐
 Alternate Formulation ☐ Experimental Use Permit ☐
 Other (Specify) _____
4. If "Me-TOO" Registration, this product is ☐ is not ☐
 similar or substantially similar to EPA's Reg. No.: _____

If not, comment in Confidential Appendix A on the differences between the registered and the new source where significant

CONFIDENTIAL STATEMENT OF FORMULA

5. Type of formulation and the sources of active ingredients:
 • Non-integrated formulation system..... ☒
 • Are all technical grade active ingredients used registered?
 • yes ☐ • no ☒ If no, specify The source product 524-LGE is under process of registration with the Agency.
 • Integrated formulation system..... ☐
6. Clearance of intentionally added ingredients in the formulation for the intended use (indicate in the Confidential Appendix those that are not cleared; the PC Codes should be provided by the chemist on the CSF for those that are cleared):
- 6(a) Formulation intended for food use under 40CFR§180.1001:
 • yes ☒ • no ☐ • Some are cleared, others are not ☐
 Cleared under list: • c ☐ • d ☒ • e ☐
 Are there any limitations for use as an inert under 40CFR§180.1001?
 • yes ☐ • no ☐ If yes, specify _____
- 6(b) Formulation intended for non-food use:
 • yes ☐ • no ☒ • Some are cleared, others are not ☐
- 6(c) Clearance by the FDA of certain formulations under 21CFR§170 to 199. Examples: (a) indirect food additives, such as food contact surface sanitizers; adhesives, coatings, paper and paperboard products that may contact food in packaging or holding; and (b) substances generally recognized as safe (GRAS).
 • yes ☐ • no ☐ • Some are cleared, others are not ☐
 If yes, the entire formulation is cleared under 21CFR§_____

7. The density, pH, and flammability values given on the CSF are identical with those of GRN 830.7300 (density), 830.7000 (pH), and 830.6315 (Flammability), respectively:
 • yes [X] • no []
8. The nominal concentrations (NC) of the active ingredients and the upper and lower certified limits (UCL & LCL) are as follows:

Active ingredient(s)		% by weight		
		NC	UCL	LCL
MON 78623 Tech. Solun. (58%)	524-LGE	84.16	(48.8)	(50.3) (47.3)

9. The calculated NCs, based on the pure active ingredients (PAI), are identical to those on the label:
 • yes [X] • no []
10. The certified limits are within the standard limits as per 40CFR§158.175 or are adequately explained if different:
 • yes [X] • no []

PRODUCT LABEL

11. The chemical names of the active ingredients on the label are identical to those on the CSF: • yes [X] • no []
12. The appropriate physical and chemical hazards statement regarding flammability or explosive characteristics of the product are given on the label:
 • yes [] • no [] • not applicable [X]
13. The storage and disposal instructions for the pesticide and container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses:
 • yes [X] • no []

PRODUCT CHEMISTRY DATA (SERIES 830 Subgroup A & Subgroup B)

14. <u>Chemical IDs/Manufacture/ Analytical Information</u> New Guideline: 830.---	<u>Data Required</u> <u>Fulfilled</u>	<u>MRID No.</u>
1550. Chemical Identity (CSF)	U	09-05-01
1600. Beginning Materials	Y	455048-01
1650. Formulation Process	Y	
1670. Discussion of Impurities	Y	" "
1700. Preliminary Analysis	Y	" "
1750. Certified Limits (CSF)	U	09-05-01
1800. Enforcmnt. of Anal. Method	Y	455048-01 HPLC with UV

15. <u>Physical/Chemical Properties</u> New Guideline No. 830.---	<u>Data Required</u> <u>Fulfilled</u>	<u>Value or Qualitat. Descrip.</u>	<u>MRID No.</u>
6303. Physical State	Y	Liquid	455048-01
7300. Density/Bulk Den.	Y	11.31 lbs/g	" "
7000. pH	Y	4.79	" "
6314. Oxid/Red Action	Y	See Note 1	" "
6315. Flamm.-Flsh Pt.	Y	>200°F	" "
6315. Flame Exten.	NA		" "
6316. Explodability	Y	Not explosive	" "
6317. Storage Stablty.	PR 92-5	I	" "
7100. Viscosity	Y	See Note 2	" "
6319. Miscibility	NA		" "
6320. Corrosion Charac	I	I	" "
6321. Dielec. Bkd. Vltg	NA		" "

Explanations: Y = The Requirements Were Fulfilled; N = The Requirements Were Not Fulfilled; NA = Not Applicable; G = Data Gap; U = Requires Upgrading; I = Incomplete or In Progress; W = Waived.

Note 1, 830.6314. Oxi/Red.: Oxidized by 1% Pot. Permanganate, Reduced by Zn, No reaction by NH₄H₂PO₄.

Note 2, 830.7100. Viscosity: 20C: (cPs/RPM): 75.7/6; 75.5/12; 76.2/30

40C: (cPs/RPM): 52.3/6; 52.0/12; 51.3/30

Used Brookfield Model DV-II Digital Viscometer

CONFIDENTIAL APPENDIX

PRODUCT CHEMISTRY REVIEW OF MP [] EP [X]

DP BARCODE No.: D278541 REG./File Symbol No.: 524-LGT

PRODUCT NAME: MON 78270 Herbicide

1. Names of the inert ingredients for which [REDACTED] LCLs have been proposed:

[REDACTED]

2. Names of the inert ingredients not cleared by the Agency:

[REDACTED]

In the data submitted for these inert ingredients, the chemical names do not match with the CAS numbers provided.

INERT INGREDIENT INFORMATION IS NOT INCLUDED



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

December 26, 2001

MEMORANDUM

Subject: MON 78270 Herbicide
EPA Reg. No. 524-LGT
DP Barcode: D278542
Case No: 071205
PC Code: 103613

From: Tracy Keigwin *TK*
Technical Review Branch
Registration Division (7505C) *SCR*

To: Vickie Walters
Herbicide Branch
Registration Division (7505C)

Applicant: Monsanto Co.
800 N. Lindbergh Blvd.
St. Louis, MO 63167

FORMULATION FROM LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt	48.8
<u>Inert Ingredient(s)</u>	<u>51.2</u>
Total:	100.00

ACTION REQUESTED: PM requests review of acute toxicity data for EPA File Symbol 524-LGT.

BACKGROUND: Monsanto Company has submitted seven acute toxicity studies in support of registration of MON78270, EPA Reg. No. 524-LGT. The studies were assigned the following MRID numbers:

Acute oral toxicity	MRID 45504802
Acute dermal toxicity	MRID 45504803
Acute inhalation toxicity	MRID 45504804
Primary eye irritation	MRID 45504805
Primary skin irritation*	MRID 45504806
Dermal sensitization	MRID 45504808

*An additional Primary Skin Irritation Study was also submitted utilizing a 30% dilution of MON 78270. This was assigned an MRID of 45504807

The studies were conducted at Springborn Laboratories, Inc., Spencerville, Ohio.

RECOMMENDATIONS: The seven studies have been reviewed and are classified as acceptable.

The acute toxicity profile for EPA Reg. No. 524-LGT is as follows:

Acute oral toxicity	IV	Acceptable	MRID 45504802
Acute dermal toxicity	IV	Acceptable	MRID 45504803
Acute inhalation toxicity	III	Acceptable	MRID 45504804
Primary eye irritation	III	Acceptable	MRID 45504805
Primary skin irritation*	III	Acceptable	MRID 45504806
Dermal sensitization	No	Acceptable	MRID 45504808

The acute toxicity category for the additional Primary Skin Irritation Study utilizing a 30% dilution of MON 78270 is as follows:

Second Primary Skin Irritation Study (30% dilution of MON 78270)	IV	Acceptable	MRID45504807
---	----	------------	--------------

NOTE TO PM: This product requires Child Resistant Packaging (CRP) since the acute Inhalation LC₅₀ for both male and female rats is between 0.77 mg/L and 2.21 mg/L (observed) and there are residential uses on the label.

LABELING: Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System.

Label Review System

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals:

CAUTION

Harmful if inhaled. Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE)

Handlers must wear:

Long sleeved shirt and pants

Shoes and socks

Chemical resistant gloves (such as nitrile or butyl) gloves

USER SAFETY REQUIREMENTS

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Wash thoroughly with soap and water after handling. Wash hands before eating, drinking chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.

525

DATA EVALUATION RECORD

STUDY TYPE: ACUTE ORAL TOXICITY TESTING (870.1100 formerly §81-1)

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid.

CITATION: Bonnette, Kimberly L. (2001) An acute oral toxicity study in rats with MON 78270. Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.835. June 14, 2001. MRID 455048-02. Unpublished

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the acute oral toxicity of MON 78270 in Sprague Dawley rats when administered as a single oral dose (limit test). Five male and 5 female Sprague-Dawley®SD® rats were used in the study. The males were 9 weeks of age and ranged in weight from 300-334 g. The females were also 9 weeks of age and ranged in weight from 192-234 g. The source for all animals was Harlan Sprague Dawley, Inc. On day "0" of the study a single dose of 5000 mg/kg (dose volume 3.79 ml/kg) of MON78270 was administered by gavage to both sexes. Animals were observed daily and weighed weekly for 14 days post dosing. Animals found dead were also weighed. A gross necropsy examination was performed on all limit test animals at time of death or scheduled euthanasia (day 14).

Oral LD50 in Males is greater than 5000 mg/kg (observed); Oral LD50 in Females is greater than 5000 mg/kg.

MON 78270 is classified as Tox category IV for acute oral toxicity based on the observed LD₅₀ value in both sexes.

One female died on day 2 of the study. Clinical abnormalities which occurred during the study included breathing abnormalities, decreased food consumption, soft/mucoid stools, few/small feces, urine/fecal stain, and dark material around the facial area. Body weight gain was noted for all surviving animals.

At necropsy the most notable observations occurred in the female that died. These abnormalities included reddened areas of the cecum, abnormal content of the digestive tract and the kidney, depressed discolored areas on the kidney, slight dilated pelvis associated with the left kidney, blackish-purple areas on the spleen, foci on the thymus and calculi present in the urinary bladder. No significant findings were observed in the remaining animals at necropsy on study day 14.

This study is classified as **Acceptable** (870.1100) and satisfies the guideline requirement for an acute oral study in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Confidentiality statements were provided.

RESULTS

Dosage (mg/kg)	Number of Deaths/Number Tested		
	Males	Females	Combined
5000	0/5	1/5	1/10

OBSERVATIONS: One female died on day 2 of the study. Clinical abnormalities which occurred during the study included breathing abnormalities, decreased food consumption, soft/mucoid stools, few/small feces, urine/fecal stain, and dark material around the facial area. Body weight gain was noted for all surviving animals.

GROSS NECROPSY: At necropsy the most notable observations occurred in the female that died. These abnormalities included reddened areas of the cecum, abnormal content of the digestive tract and the kidney, depressed discolored areas on the kidney, slight dilated pelvis associated with the left kidney, blackish-purple areas on the spleen, foci on the thymus and calculi present in the urinary bladder. No significant findings were observed in the remaining animals at necropsy on study day 14.

DATA EVALUATION RECORD

STUDY TYPE: ACUTE DERMAL TOXICITY TESTING (870.1200 formerly §81-2)

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid.

CITATION: Bonnette, Kimberly L. (2001) An acute dermal toxicity study in rats with MON 78270. Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.837. June 14, 2001. MRID 455048-03. Unpublished

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the acute dermal toxicity of MON 78270 in Sprague Dawley rats when administered as a single dermal dose (Limit test). Five male and 5 female Sprague-Dawley®SD® rats were used in the study. The males were 10 weeks of age and ranged in weight from 315-354 g. The females were also 10 weeks of age and ranged in weight from 198-225 g. The source for all animals was Harlan Sprague Dawley, Inc. On the day prior to study initiation, fur was removed from approximately 10% of the body surface area (BSA) of the animal. On day "0" the 4 corners of the clipped area were marked with an indelible marker and a single dose of 5000 mg/kg (dose volume 3.79 ml/kg) of the MON 78270 was applied to the skin for 24 hours. A 4-ply porous gauze dressing backed with a plastic wrap held the test article against the skin and binding materials placed over the trunk and test area to secure the substance against the skin and prevent removal or ingestion of the test material by the subject animal. After 24 hours the test article was removed and animals were observed for erythema and edema on day 1 and daily thereafter (days 2-14). General health and mortality checks were performed twice daily (morning and evening). A gross necropsy examination was performed on all selected animals at time of scheduled euthanasia (day 14).

The Dermal LD50 for Males is greater than 5000 mg/kg (observed); Oral LD50 for Females is > 5000 mg/kg (observed)

MON 78270 is classified as Tox category IV for acute dermal toxicity based on the observed LD₅₀ values in both sexes.

No animals died during the study. Clinical abnormalities which occurred during the study included few feces and dark material around the facial area. Dermal irritation was noted at the site of the test material application. A slight body weight loss was noted for 4 of the male animals during the 0 to 7 day interval of the test. All animals exceeded their initial body weight by day 14 (study termination).

There were no significant gross internal findings on study date 14.

This study is classified as **Acceptable** (870.1200) and satisfies the guideline requirement for an acute dermal study in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance and (No)Confidentiality statements were provided.

RESULTS

Dosage (mg/kg)	Number of Deaths/Number Tested		
	Males	Females	Combined
5000	0/5	0/5	0/10

OBSERVATIONS: No animals died during the study. Clinical abnormalities which occurred during the study included few feces and dark material around the facial area. Dermal irritation was noted at the site of the test material application. A slight body weight loss was noted for 4 of the male animals during the 0 to 7 day interval of the test. All animals exceeded their initial body weight by day 14 (study termination).

GROSS NECROPSY: There were no significant gross internal findings on study date 14.

DATA EVALUATION RECORD

STUDY TYPE: ACUTE INHALATION TOXICITY TESTING (870.1300 formerly §81-3)

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid.

CITATION: Bonnette, Kimberly L. (2001) An acute Nose-only inhalation toxicity study in rats with MON 78270. Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.838. June 19, 2001. MRID 455048-04. Unpublished.

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the acute inhalation toxicity of MON 78270 in Sprague Dawley rats. Test subjects were exposed to four hour nose only inhalation exposures of 0.77 mg/L and 2.21mg/L. Ten male and 10 female Sprague-Dawley®SD® rats were used in the study. The males were 9- 11 weeks of age and ranged in weight from 306 - 353 g. The females were 9 - 12 weeks of age and ranged in weight from 211 - 241g. The source for all animals was Harlan Sprague Dawley, Inc. On day "0" selected animals were placed in exposure tubes and the tubes inserted into a Unifab 100L nose-only inhalation chamber. The testing substance was aerosolized to analytical exposure levels of 0.77 mg/L and 2.21 mg/L. Five male and 5 female rats were tested at each exposure level for a period of 4 hours. After exposure, animals were observed daily and weighed weekly. Necropsy examination was performed on the selected animals either at time of death or scheduled euthanasia (day 14).

The acute Inhalation LC₅₀ for both male and females is between 0.77 mg/L and 2.21 mg/L (observed)

MON 78270 is classified as Tox Category III for acute inhalation based on the observed LC₅₀ in both sexes.

340

At 0.77 mg/L, all animals survived. At 2.21 mg/L, 5 animals died on day 2, 1 on day 4 and 2 on day 11. There were many significant clinical abnormalities noted in the test animals. These abnormalities included urine/fecal stain, wobbly gait, breathing abnormalities (congested breathing, labored breathing, gasping, shallow breathing, rapid or slow breathing), ocular lesions, decreased defecation, hunched posture, apparent hypothermia, dehydration, soft stools, small (in size) feces, rough haircoat, unkempt appearance, decreased activity, dark material around the facial area, dilated pupils, eyelids partially closed, nasal discharge, decreased food consumption and scabbing in nose region. Additionally, there was a body weight loss noted in almost all of the male and female rats at the 0.77 mg/L analytical exposure level and in 2 of the females at the 2.21 analytical exposure level. With the exception of one of the females at the 0.77 mg/L level, surviving animals at least maintained or (in some cases) gained weight by study termination (day 14).

There were significant gross internal findings in the animals that died. These included distended intestine/stomach, dark red lungs and abnormal contents in the digestive tract. There were no significant abnormalities in the surviving animals at necropsy on study day 14.

This study is classified as **Acceptable** (870.1300) and satisfies the guideline requirement for an acute inhalation study in the rat.

COMPLIANCE: Signed and dated GLP, Quality Assurance and (No)Confidentiality statements were provided.

RESULTS

Exposure Concentration (mg/L) (Analytical Exposure Level)	Number of Deaths/Number Tested		
	Males	Females	Combined
0.77	0/5	0/5	0/10
2.21	5/5	3/5	8/10

Death occurred by study day 11

Chamber atmosphere

Exposure Concentration (mg/L) (Analytical Exposure Level)	MMAD (μm)	GSD
0.77	2.5	± 1.6
2.21	2.8	± 1.8

Chamber Environment (nose only)

	Analytical Exposure Level (mg/L)	
	0.77	2.21
Chamber volume (L)	100	100
Mean Airflow Rate (L/min)	23.5	27.0
Temperature ($^{\circ}\text{F}$)	71-72	72-73
Relative Humidity (%)	39-44	39-40

OBSERVATIONS: At 0.77 mg/L, all animals survived. At 2.21 mg/L, 5 animals died on day 2, 1 on day 4 and 2 on day 11. There were many significant clinical abnormalities noted in the test animals. These abnormalities included urine/fecal stain, wobbly gait, breathing abnormalities (congested breathing, labored breathing, gasping, shallow breathing, rapid or slow breathing), ocular lesions, decreased defecation, hunched posture, apparent hypothermia, dehydration, soft stools, small (in size) feces, rough haircoat, unkempt appearance, decreased activity, dark material around the facial area, dilated pupils, eyelids partially closed, nasal discharge, decreased food consumption and scabbing in nose region. Additionally, there was a body weight loss noted in almost all of the male and female rats at the 0.77 mg/L analytical exposure level and in 2 of the females at the 2.21 analytical exposure level. With the exception of one of the females at the 0.77 mg/L level, surviving animals at least maintained or (in some cases) gained weight by study termination (day 14).

GROSS NECROPSY: There were significant gross internal findings in the animals that died. These included distended intestine/stomach, dark red lungs and abnormal contents in the digestive tract. There were no significant abnormalities in the surviving animals at necropsy on study day 14.

DATA EVALUATION RECORD

STUDY TYPE: PRIMARY EYE IRRITATION STUDY (870.2400 formerly §81-4)

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid.

CITATION: Bonnette, Kimberly L. (2001) A Primary Eye Irritation Study in Rabbits With MON 78270. Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.825. June 13, 2001. MRID 455048-05. (Unpublished).

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the potential irritating or corrosive effects of MON 78270 in the eyes of New Zealand White rabbits. The test was performed on 1 male (age 13 weeks, 2.9 kg) and 2 females (age 13 weeks, 2.9 - 3.2 kg). The source for all animals was Myrtle's Rabbitry, Thompson Station, TN. On day "0" of the study 0.1 mL of the test article was instilled into the conjunctival sac of the right eye of the selected animals. The eyelids were held together for approximately one second in order to limit any loss of the testing. The left eyes of the selected animals were untreated to serve as a control. After the 24 hour observation, the test substance was removed from the eye (when possible) using a saline wash. Test and control eyes were examined for signs of irritation at 1, 24, 48 and 72 hours and up to 10 days after dosing. Animals were observed for health/mortality twice daily (morning and afternoon). Animals were euthanized following their final observation interval. Note that the relative humidity exceeded the preferred range (30-70%) on two occasions during this study, but this did not affect the outcome of the study.

MON78270 is placed in Tox category III since there were signs of corneal involvement or irritation that cleared within 7 days or less.

One out of 3 rabbits tested positive for corneal opacity at 1, 24 and 48 hours. Iritis occurred in 2 of the 3 rabbits at 1 hour, and then 1 out of 3 rabbits at 24 hours. After 24 hours there were no positive observations of iritis. All 3 animals tested positive for conjunctivitis at the 1 hour interval. Two out of 3 test animals continued to test positive for conjunctivitis at 24 hours, resolving by 72 hours.

This study is classified as **Acceptable** (870.2400) and satisfies the guideline requirement for a primary eye irritation study in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance and (No)Confidentiality statements were provided.

RESULTS

A summary of the noted effects is listed (below)

Observations	Number "positive"/number tested			
	Hours			
	1	24	48	72
Corneal Opacity	1/3	1/3	1/3	0/3
Iritis	2/3	1/3	0/3	0/3
Conjunctivae:				
Redness*	0/3	1/3	1/3	0/3
Chemosis*	3/3	1/3	0/3	0/3
Discharge*	0/3	0/3	0/3	0/3

*Score of 2 or more required to be considered "positive."

OBSERVATIONS: One out of 3 rabbits tested positive for corneal opacity at 1, 24 and 48 hours. Iritis occurred in 2 of the 3 rabbits at 1 hour, and then 1 out of 3 rabbits at 24 hours. After 24 hours there were no positive observations of iritis. All 3 animals tested positive for conjunctivitis at the 1 hour interval. Two out of 3 test animals continued to test positive for conjunctivitis at 24 hours, resolving by 72 hours.

DATA EVALUATION RECORD

STUDY TYPE: PRIMARY DERMAL IRRITATION TESTING (870.2500 formerly §81-2)

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid.

CITATION: Bonnette, Kimberly L. (2001) A Primary Skin Irritation Study in Rabbits with MON 78270. Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.839. June 14, 2001. MRID 455048-06. Unpublished

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the potential for irritating or corrosive effects of MON 78270 in New Zealand White rabbits. Three male rabbits were used in the study ranging in age from 12 - 17 weeks and 2.5 - 2.9 kg. The source for all animals was Myrtle's Rabbitry, Thompson Station, TN. On the day prior to study initiation, fur was removed from the dorsal trunk area of the selected animals with animal clippers. On day "0" 0.5-ml of the test substance was applied to a an area of skin of approximately 1" x 1". The test substance was administered underneath a 1" x 1" gauze patch and binding materials placed over the patch to secure the substance against the skin and prevent removal or ingestion of the test material by the subject animal. After a 4 hour period of exposure, all binding materials were removed and the corners of the test site outlined with an indelible marker. Any residual test article was removed via a gauze moistened with deionized water followed by a dry gauze. Following patch removal animals were observed and scored for erythema and edema at 1 hour, 24 hours, 48 hours, 72 hours and up to 14 days after patch removal. Animals were observed for health/mortality twice daily (morning and afternoon).

MON 78270 is classified as Tox Category III based on the presence of moderate irritation at 72 hours.

The Primary Dermal Irritation Index (PDII) = 2.17. Very slight to well-defined erythema was noted at all 3 dose sites and very slight edema at 2 of the 3 sites one hour after patch removal. This degree of irritation persisted through 72 hours when 3 out of the 3 sites showed well defined erythema with very slight edema at 2 of the 3 sites. All sites were free of dermal irritation by day 14.

This study is classified as **Acceptable** (870.2500) and satisfies the guideline requirement for a Primary Dermal Irritation study in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance and (No)Confidentiality statements were provided.

RESULTS: The Primary Dermal Irritation Index (PDII) = 2.17. A summary of the noted effects is listed (below)

Rabbit	Observations	Hours				Days		
		1	24	48	72	Day 7	Day 10	Day 14
R4812/M	Erythema	1	2	2	2	1	0	0
	Edema	1	0	0	0	0	0	0
R4804/M	Erythema	2	1	2	2	2	1	0
	Edema	1	0	0	1	1	0	0
R4244/M	Erythema	2	2	2	2	1	0	0
	Edema	0	0	0	1	0	0	0

OBSERVATIONS: The Primary Dermal Irritation Index (PDII) = 2.17. Very slight to well-defined erythema was noted at all 3 dose sites and very slight edema at 2 of the 3 sites one hour after patch removal. This degree of irritation persisted through 72 hours when 3 out of the 3 sites showed well defined erythema with very slight edema at 2 of the 3 sites. All sites were free of dermal irritation by day 14.

DATA EVALUATION RECORD

STUDY TYPE: PRIMARY DERMAL IRRITATION TESTING (870.2500 formerly §81-2) **NOTE:** This study is a 30% Dilution of MON 78270

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid. (MON 78270 prepared as a 30% dilution in deionized water for dosing. Target concentration =30%, Analytical concentration =34.2%)

CITATION: Bonnette, Kimberly L. (2001) A Primary Skin Irritation Study in Rabbits with 30% MON 78270. Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.858. July 27, 2001. MRID 455048-07. Unpublished.

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the potential for irritating or corrosive effects of a 30% Dilution of MON 78270 in New Zealand White rabbits. Three Male New Zealand White rabbits (age 13 weeks, weight 2.6 - 2.9 kg) were used. The source for all animals was Myrtle's Rabbitry, Thompson Station, TN. On the day prior to study initiation, fur was removed from the dorsal trunk area of the selected animals with animal clippers. On the day prior to study initiation, fur was removed from the dorsal trunk area of the selected animals with animal clippers. On day "0" 0.5 ml of the test substance was applied to an area of skin of approximately 1" x 1". The test substance was administered underneath a 1" x 1" gauze patch and binding materials placed over the patch to secure the substance against the skin and prevent removal or ingestion of the test material by the subject animal. After a 4 hour period of exposure, all binding materials were removed and the corners of the test site outlined with an indelible marker. Any residual test article was removed via a gauze moistened with deionized water followed by a dry gauze. Following patch removal animals were observed and scored for erythema and edema at 1 hour, 24 hours, 48 hours, 72 hours and up to 14 days after patch removal. Animals were observed for health/mortality twice daily (morning and afternoon).

The 30% dilution of MON 78270 is classified as Tox Category IV based on the presence of no irritation at 72 hours

The Primary Dermal Irritation Index (PDII) = 0.42. Very slight erythema was noted in all 3 animals, in 2 of the 3 for the first hour and in 1 animal through 48 hours. No edema was noted in any of the animals.

This study is classified as **Acceptable** (870.2500) and satisfies the guideline requirement for a Primary Dermal Irritation study in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Confidentiality statements were provided.

RESULTS: A summary of the noted effects is listed below. The Primary Dermal Irritation Index (PDII) = 0.42. Erythema was noted in all 3 animals, in 2 of the 3 for the first hour and in 1 animal through 48 hours. No edema was noted in any of the animals.

Rabbit	Observations	Hours			
		1	24	48	72
R0328/M	Erythema	1	0	0	0
	Edema	0	0	0	0
R0329/M	Erythema	1	0	0	0
	Edema	0	0	0	0
R0330/M	Erythema	1	1	1	0
	Edema	0	0	0	0

DATA EVALUATION RECORD

STUDY TYPE : PRIMARY DERMAL SENSITIZATION TESTING (870.2600 formerly §81-2)

Product Manager: 25

Reviewer: Tracy Keigwin

TEST MATERIAL PURITY: 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate], Lot # - GLP-0101-10834-F/ID - S01.011.3044, Light amber liquid.

CITATION: Bonnette, Kimberly L. (2001) A Dermal Sensitization Study in Guinea Pigs with MON 78270 (Modified Buehler Design). Springborn Laboratories, Inc., Spencerville, Ohio. SLI Study Number 3044.840. June 13, 2001. MRID 455048-08. Unpublished

SPONSOR: Monsanto Company, 800 N. Lindbergh Blvd. St. Louis, MO 63141

EXECUTIVE SUMMARY: This study assessed the dermal sensitization potential of MON 78270 in Hartley-derived albino guinea pigs (Modified Buehler Design). Fifteen male Hartley-derived albino guinea pigs (age 7 weeks, weight 350-426 g) and 15 female Hartley-derived albino guinea pigs (age 8 weeks, weight 318-398) were selected for testing purposes. The source for all animals was Hilltop Lab animals, Inc. Scottdale, PA. This study was divided into 3 "Induction" doses at day 0, 7, and 14 days, followed by a challenge dose at day 28. Ten test animals of each sex were weighed and their left sides shaved with animal clippers the day prior to each induction dose. At each induction a dose of 0.3 mL (100% concentration) of the test substance was applied and allowed to remain for approximately 6 hours. This was repeated once per week for a total of 3 doses. The animals rested for 2 weeks. The day prior to the challenge dose the animals were again weighed and their right side shaved with animal clippers. An additional 5 male animals and 5 female animals were weighed and shaved to serve as a challenge control group. On day 28 of the study chambers were attached to the test and control animals and a dose of 0.3 mL (100% concentration) of MON78270 applied for a 6 hour challenge exposure. Reactions were scored 24 and 48 hours after each induction and after the challenge. Animals were observed for health/mortality twice daily (morning and afternoon). Note that the animal relative humidity range exceeded the preferred range on 3 occasions during the study, however this did not affect the outcome of the study. A positive control study using α -Hexylcinnamaldehyde was conducted within six months of the main study to validate the test system.

MON 78270 is classified as a non sensitizer based on the results in this study.

Slight patchy erythema (grade \pm) was observed at 5 of the 20 test animal sites during the induction phase. Following the challenges, no dermal responses were noted in either the test animal group or the naive control group. The results of the α -Hexylcinnamaldehyde positive control study were appropriate.

This study is classified as Acceptable (870.2600) and satisfies the guideline requirement for a Primary Dermal Sensitization Study in the guinea pig.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Confidentiality statements were provided.

PROCEDURE: Fifteen male Hartley-derived albino guinea pigs (age 7 weeks, weight 350-426 g) and 15 female Hartley-derived albino guinea pigs (age 8 weeks, weight 318-398) were selected for testing purposes. The source for all animals was Hilltop Lab animals, Inc. Scottdale, PA. This study was divided into 3 "Induction" doses at day 0, 7, and 14 days, followed by a challenge dose at day 28. Ten test animals of each sex were weighed and their left sides shaved with animal clippers the day prior to each induction dose. At each induction a dose of 0.3 mL (100% concentration) of the test substance was applied and allowed to remain for approximately 6 hours. This was repeated once per week for a total of 3 doses. The animals rested for 2 weeks. The day prior to the challenge dose the animals were again weighed and their right side shaved with animal clippers. An additional 5 male animals and 5 female animals were weighed and shaved to serve as a challenge control group. On day 28 of the study chambers were attached to the test and control animals and a dose of 0.3 mL (100% concentration) of MON78270 applied for a 6 hour challenge exposure. Reactions were scored 24 and 48 hours after each induction and after the challenge. Animals were observed for health/mortality twice daily (morning and afternoon). Note that the animal relative humidity range exceeded the preferred range on 3 occasions during the study, however this did not affect the outcome of the study. A positive control study using α -Hexylcinnamaldehyde was conducted within six months of the main study to validate the test system.

RESULTS: Slight patchy erythema (grade \pm) was observed at 5 of the 20 test animal sites during the induction phase. Following the challenges, no dermal responses were noted in either the test animal group or the naive control group. The results of the α -Hexylcinnamaldehyde positive control study were appropriate.

ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D278542
2. **PC CODE:** 103613
3. **CURRENT DATE:** 26/DEC/2001
4. **TEST MATERIAL:** MON 78270 - 39.6% glyphosate acid (a.e.) [48.5% potassium salt of glyphosate]

Study/Species/Lab Study # /Date	MRID	Results	Tox Cat.	Core Grade
Acute oral toxicity/rat Springborn Laboratories, Inc., 3044.835/June 14, 2001	45504802	LD ₅₀ > 5000 mg/kg (males and females combined)	IV	A
Acute dermal toxicity/rat Springborn Laboratories, Inc., 3044.837/June 14, 2001	45504803	LD ₅₀ > 5000 mg/kg (males and females combined)	IV	A
Acute inhalation toxicity/rat Springborn Laboratories, Inc., 3044.838/June 19, 2001	45504804	LC ₅₀ > 0.77 mg/L, < 2.21 mg/L (males and females combined)	III	A
Primary eye irritation/rabbit Springborn Laboratories, Inc., 3044.825/June 13, 2001	45504805	Moderate irritant	III	A
Primary dermal irritation/rabbit Springborn Laboratories, Inc., 3044.839/June 14, 2001	45504806	PDII = 2.17, Moderate irritant	III	A
Primary dermal irritation <u>30% Dilution</u> / rabbit Springborn Laboratories, Inc., 3044.858/July 27, 2001	45504807	PDII = 0.42, not an irritant	IV	A
Dermal sensitization/guinea pig Springborn Laboratories, Inc., 3044.840/June 13, 2001	45504808	Not a sensitizer	-	A

Core Grade Key: A = Acceptable, S = Supplementary, U = Unacceptable, V = Self Validated



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 21 2002

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Mr. Stephen J. Wratten
Monsanto Company
600 13th Street, NW, Suite 660
Washington, DC 20005

Dear Mr. Wratten:

Subject: Roundup Ultra Herbicide

EPA Pesticide Petition No. 0F6130 (Grasses)

EPA Pesticide Petition No. 0F6195 (Non-Grass Animal Feeds)

EPA Pesticide Petition No. 1F6273 (Roundup Ready Wheat)

MON 78623 58% Technical Solution

EPA File Symbol 524-LGE

MON 78270 Herbicide

EPA File Symbol 524-LGT ✓

MON 78460 Herbicide

EPA File Symbol 524-LGO

MON 78271 Herbicide

EPA File Symbol 524-LGI

EPA Pesticide Petition No. 1F6295

Applications Dated March 28, July 19, 2000; March 21, 28, 2001; September 18, 2001,
and January 9, 2002

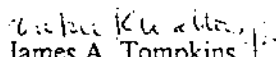
The scientific review and evaluation of the information submitted in support of the subject petitions have been completed. The following are a summary of our conclusions and/or comments. Refer to enclosed copies of reviews for detailed discussion.

1. The proposed use directions for grasses are not adequate. A revised Section B must be submitted specifying a 0-day PGI and PHI for the proposed postemergence use on grass forage and include a 30-day plant back restriction for rotational crops.
2. The proposed use directions for non-grass animal feeds are not adequate. A revised Section B must be submitted specifying a 30-day plant back restriction for rotational crops.
3. The proposed use directions for Roundup Ready Wheat are not adequate. A revised Section B must be submitted stating that the maximum combined application rate is 4.875 lb ae /A/ season when more than one type of application (preemergence, postemergence, or preharvest) is made and include a 30-day plant back restriction for rotational crops. Specifically, the maximum use pattern for Roundup Ready Wheat consists of the following: 160 ounces (oz) of Roundup Ultra as preplant/preemergence application + 16 oz postemergence over-the-top + 32 oz preharvest application=208 oz total.
4. The nature of the residue in and plants and livestock are adequately understood.
5. Adequate analytical methods are available.

6. No additional storage stability data are required.
7. The crop field trials for glyphosate in grass forage and hay are acceptable and satisfy the guideline requirements. The available data support the proposed tolerance of 300 ppm for the grass forage, fodder and hay group.
8. The submitted field trial data for wheat is acceptable and satisfies the guideline requirements for this use only. Additional field trial data to represent regions in which winter wheat is typically grown will be required for any expanded use to include winter wheat.
9. Available data indicate the residues of glyphosate will not exceed the currently established tolerance of 100 ppm for grain, cereal, stover, and straw group. The data supports the proposed tolerance of 10 ppm on wheat forage and hay. The data also indicate no discernable difference in glyphosate residue levels could be attributed to the wheat strain tested.
10. The available data indicate that a tolerance of 6.0 ppm is needed for wheat grain. A revised Section F must be submitted.
11. Insufficient data were submitted to support removal of the restriction against the use of additives (nonionic surfactants and ammonium sulfate) from the label. Treatment 5 provided data representative of the proposed use pattern including additives for wheat forage only. These data indicate an increase in average glyphosate residue levels of approximately 20% above what is obtained without additive use. Prior to removal of the additive restriction, additional data would be required reflecting use of additives in applications made according to the respective maximum proposed use patterns for wheat hay, grain, and straw. Thus, the current label restriction against the use of additives is appropriate and should be retained for wheat uses.
12. The crop field trials for nongrass animal feed (alfalfa and clover) are acceptable and support the proposed tolerance of 400 ppm for glyphosate *per se* in/on the animal feed, non grass group.
13. The submitted processed food/feed study is acceptable and indicates that residues occurring in wheat processed commodities will be covered by the existing tolerance of 20 ppm for wheat, milling fractions (except flour) and the proposed 100 ppm tolerances for aspirated grain fractions.
14. Because rotational crop data have not been submitted in support of a 0-day plant back interval (PBI) for rotational crops, the "30-day PBI for crops on which the use of glyphosate is not registered" must be placed back on the label.
15. The request to include the potassium salt to the glyphosate tolerance expression is acceptable.

Further action will await submission of revised sections F and B. Refer to enclosed reviews for details.

Sincerely,


James A. Tompkins
Product Manager 25
Herbicide Branch
Registration Division (7505C)

N/ET

MONSANTO

Food · Health · Hope



B

MONSANTO COMPANY
600 13TH STREET, NW
SUITE 660
WASHINGTON, D.C. 20005
<http://www.monsanto.com>

Sept. 5, 2001

Hand Delivered

Office of Pesticide Programs
Document Processing Center (APPL)
U.S. Environmental Protection Agency
Room 266A, Crystal Mall #2
1921 Jefferson Davis Highway
Arlington, VA 22202

Attention: Mr. James A. Tompkins (7505C)
Team Leader (25)

Subject: MON 78270 Herbicide (EPA Reg. No. 524-~~xxx~~)
Request for Registration of a New Pesticide Product
Data Submission: R.D. No. 1550

LCT

Dear Mr. Tompkins:

Monsanto herein submits 9 volumes of information as R.D. 1550 in support of our Application to Register a new pesticide product identified as MON 78270 Herbicide, a formulated end-use product containing the potassium salt of glyphosate for use to control weeds in food crop and non-food sites.

R.D. 1550 includes one volume of administrative information, followed by eight volumes of product chemistry, and acute mammalian toxicity data. Proposed labels for use, the Confidential Statement of Formula, an Application for Pesticide Registration and other associated administrative materials can be found in Volume 1, along with explanatory information on the basis of the label and CSF. For your administrative use, I also enclose attached to this letter three (3) additional copies label contained in Volume 1.

I should note that the proposed label for MON 78270 is identical to the recently submitted Master Label for Roundup Ultra / Roundup Pro under EPA Reg. No. 524-475, with

Mr. Tompkins Page 2
Sept. 5, 2001

adjustments made in application rates to keep the amount of glyphosate acid equivalents applied constant.

Monsanto also requests approval of the potassium salt manufacturing-use product, MON 78623 58% Technical Solution (EPA File Symbol 524-LGE), which will be used to prepare MON 78270 Herbicide, as well as Pesticide Petition 1F6295, which will establish a residue definition in 40 CFR 180.364 (a) that includes "potassium" as an allowed salt form of glyphosate for the purposes of food tolerances. An application to register this manufacturing-use product was submitted in March 2001. Its approval and the tolerance regulations change are necessary to support the present registration application.

If you have any questions on this matter please feel free to contact me through Dr. Marsha C. Gray (202-383-2878) or by direct phone (314-694-1582), fax (314-694-4028), or electronic mail at stephen.j.wratten@monsanto.com.

Sincerely,



Stephen J. Wratten
Manager, Registrations

cc: M. C. Gray

RD 1550 MON 78270 cov.doc

OCT 1 2001

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

MONSANTO COMPANY
700 CHESTERFIELD PARKWAY NORTH
ST LOUIS, MO 63198

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 09/11/01. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

TRANSMITTAL DOCUMENT

SUBMITTED BY

Monsanto Co.
800 N. Lindbergh Blvd.
St. Louis, MO 63167

REGULATORY ACTION IN SUPPORT OF WHICH THE PACKAGE IS SUBMITTED

Support the Application for Registration of MON 78270 Herbicide

DATA GUIDELINES

Series 61, 62, and 63 [OPPTS Series 830]

81-1, 81-2, 81-3, 81-4, 81-5, 81-6 [OPPTS Series 870.1200 - 870.2600]

TRANSMITTAL DATE

Sept. 5, 2001

SUBMISSION NUMBER

R.D. 1550

LIST OF SUBMITTED DATA:

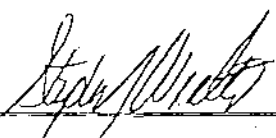
Volume	Monsanto Study Number	Author	Title
1	R.D. 1550	Wrauen, Stephen J.	Administrative Materials in Support of Registration of MON 78270 Herbicide.

MRID Admin.

2	MSL-17415	Gunter, C. A.	Product Chemistry Data to Support the Registration of MON 78270 Herbicide
---	-----------	---------------	--

MRID 45504801

3	SB-2001-045	Bonnette, Kimberly L	An Acute Oral Toxicity Study in Rats with MON 78270
			MRID <u>45504802</u>
4	SB-2001-046	Bonnette, Kimberly L	An Acute Dermal Toxicity Study in Rats with MON 78270
			MRID <u>45504803</u>
5	SB-2001-047	Bonnette, Kimberly L	An Acute Nose-Only Inhalation Toxicity Study in Rats with MON 78270
			MRID <u>45504804</u>
6	SB-2001-010	Bonnette, Kimberly L	A Primary Eye Irritation Study in Rabbits with MON 78270
			MRID <u>45504805</u>
7	SB-2001-048	Bonnette, Kimberly L	A Primary Skin Irritation Study in Rabbits with MON 78270
			MRID <u>45504806</u>
8	SB-2001-095	Bonnette, Kimberly L	A Primary Skin Irritation Study in Rabbits with 30% Dilution of MON 78270
			MRID <u>45504807</u>
9	SB-2001-049	Bonnette, Kimberly L	A Dermal Sensitization Study in Guinea Pigs with MON 78270 - Modified Buehler Design
			MRID <u>45504808</u>

COMPANY OFFICIAL: 

Stephen J. Wratten
Manager, Registrations

COMPANY NAME: Monsanto Co.
COMPANY CONTACT: Dr. Marsha C. Gray, (202)-783-2878

554



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

9/13/2001

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Monsanto Company
600 13th Street NW, Suite 660
Washington, DC 20005

PRODUCT NAME: MON 78270 Herbicide
COMPANY NAME: Monsanto Company
OPP IDENTIFICATION NUMBER: 286601
EPA FILE SYMBOL: 524-LGT
EPA RECEIPT DATE: 9/12/01
SUBJECT: RECEIPT OF APPLICATION FOR A NEW REGISTRATION

DEAR REGISTRANT:

The Office of Pesticides Programs has received your application for a new registration and it has passed an administrative screen for completeness.

Please note that this is only a notification of receipt of our application. This is only the first step in the application process, and does NOT constitute approval.

If you have any questions, please contact Product Manager 25, James Tompkins at (703)-305-5697.

Sincerely,

A handwritten signature in cursive script that reads "Beverly Stroud".

Front End Processing Staff
Information Services Branch
Information Resources & Services Division



United States
Environmental Protection Agency
Washington, DC 20460

☒ Registration
☐ Amendment
☐ Other

OPP Identifier Number

286601
268287

Application for Pesticide - Section I

1. Company/Product Number 524- xxx LCT	2. EPA Product Manager Mr. James Tompkins ✓	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) MON 78270 Herbicide	PM# 25 ✓	
5. Name and Address of Applicant (Include ZIP Code) Monsanto Company 600 13th Street, N.W., Suite 660 Washington, DC 20005 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Metal	<input type="checkbox"/> Plastic
Certification must be submitted				<input type="checkbox"/> Glass	<input type="checkbox"/> Paper
	If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container		<input type="checkbox"/> Other (Specify) _____	
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container	5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product		
6. Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled			<input type="checkbox"/> Other _____		

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Dr. Marsha Gray	Title Registration Manager	Telephone No. (Include Area Code) (202) 783-2460
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		8. Date Application Received (Stamped)
Signature 	3. Title Manager, Registrations	
4. Typed Name Stephen J. Wratten, Ph.D.	5. Date September 5, 2001	

Section B
MON 78270 Herbicide

Directions for Use

*original label
replaced by
one submitted
1/11/02*

Proposed Master Labeling Text.....20 - 137

Explanation of Label Text Source138 - 143

01900187

505

Explanation of Label Statements

The proposed label originated from approved uses for Roundup Ultra herbicide (524-475), Roundup Pro Herbicide (524-475), and Roundup UltraMAX herbicide (524-512), modified as needed for the individual properties of MON 78270 Herbicide in consideration of the guidance provided by the EPA Label Manual. The proposed label is organized as a "Master Label", to facilitate updating and expansion as new uses are approved in the future. It includes:

Part I – primary labeling text for crop uses

Part II – Supplemental labeling for crop uses

Part III – Primary labeling text for non-crop uses

Part IV – Supplemental labeling for non-crop uses

This is the same basic label as we will propose as a Master label for other glyphosate herbicides.

There are no uses or use sites proposed for MON 78270 Herbicide that are not already approved by EPA for glyphosate-containing herbicides. The application rates proposed herein are essentially the same as presently approved for glyphosate herbicides, when compared on an acid equivalent basis. The stated maximum use rates throughout this label do not exceed those already allowed and labeled for these uses on an acid equivalent basis.

Ingredients statements. The chemical name for glyphosate is used, according to PR Notice 97-5. The terminology "Other Ingredients" in accordance with PR Notice 97-6 is used. The content statements in grams per liter and pounds per gallon of glyphosate potassium salt are derived from the product's density (1.3555 g/mL or 11.311 lb/gal) and the nominal percentages by weight specified in the CSF in accordance with Pesticide Regulation Notice 91-2:

Calculated in terms of glyphosate potassium salt content

glyphosate potassium salt (0.58 x 0.8416) = 0.4881% [round to 48.8%] by weight	(0.4881 x 11.311 lb/gal) = 5.521 lb/gal [round to 5.5 lb/gal]	5.521 lb/gal x 453.8 g/lb ÷ 3.785 L/gal = 661.9 [round to 660 g/L]
--	---	--

Calculated in terms of glyphosate acid content

glyphosate acid (0.4881 x 0.8161*) = 0.3983 [round to 39.8%] by weight	(0.3983 x 11.31 lb/gal) = 4.505 lb/gal [round to 4.5 lb/gal]	4.505 lb/gal x 453.8 g/lb ÷ 3.785 L/gal = 540.1 [round to 540 g/L]
---	---	---

*ratio of molecular weights of glyphosate acid : glyphosate potassium salt (169.08 / 207.17) is 0.8161.

Precautionary Text. Acute toxicity studies (Volumes 3 - 9 of this submission) showed:

870.1100	Acute oral	IV
870.1200	Acute dermal	IV
870.1300	Acute inhalation	III
870.2400	Eye irritation	III
870.2500	Skin irritation – product concentrate as sold	III
870.2500	Skin irritation – 30% aqueous dilution	IV
870.2600	Sensitization	No

On the basis of these findings, using the EPA's Label Review Manual, Chapter 8, precautionary statements and personal protective equipment statements were included. The appropriate signal word is CAUTION! Based on the pending PR Notice 2001-1 ("First Aid Statements on Pesticide Product Labels"), the new format for First Aid Statements and boxed format are used.

A Note to Physician was not included because there is no known antidote for the effects of this active ingredient, acute poisoning is not expected based on the favorable toxicity testing, and there are no characteristic symptoms of poisoning which should be highlighted. PR Notice 2001-1 indicates that a Note to Physician is only required when the product is rated in Category I.

In addition to the standard six acute toxicology studies conducted on MON 78270 herbicide concentrate, Monsanto has conducted and submitted a second skin irritation study using a 30:70, MON 78270:water, dilution to represent the most concentrated application solution that is likely to be used by applicators. The result of this dilution study showed that such a 30% water solution was non-irritating to the skin (Category IV). Based on that finding, we propose to include the following sentence in the label in addition to the PPE statement required for handling the product concentrate:

"Applicators, when handling aqueous spray solutions in which the concentration of this product is 30% or less, must wear the PPE specified above, except that gloves are not required during such application."

We believe that this statement provides appropriate precautionary guidance to applicators. Wearing gloves during spray applications can be uncomfortable and awkward when handling complex spray equipment and motor-driven machinery. Applicators generally do not like such a requirement, although they recognize the need for gloves when mixing and loading. When data can be developed to show that gloves during application are unnecessary, it is reasonable to remove this requirement as we propose. EPA's Label Manual (Chapter 8, page 22 of 23) provides for including additional precautionary label language pertaining to use dilutions as long as data are provided to support the statements.

Some uses of MON 78270 Herbicide are within the scope of the Worker Protection Standard (WPS); it is intended for spraying in either agricultural or non-agricultural situations. As a result, the Personal Protective Equipment (PPE) and personal hygiene statements are formatted and organized in the label according to the instructions in Pesticide Regulation Notice 93-7 rather than as outlined in the Label manual. In addition, according to direction from EPA Product Manager 25, the term "waterproof gloves" as specified in PR-93-7 has been changed in the label to "chemical resistant gloves greater than 14 mils in thickness composed of materials such as butyl rubber, natural rubber,

neoprene rubber, or nitrile rubber”

Environmental Hazards. The standard text from the Label Manual, which is also consistent with the Glyphosate RED (1993), has been used.

Physical or Chemical Hazards. The only hazard to be notified is the possibility of reaction of glyphosate solutions with steel to release hydrogen gas. The text is standard on all glyphosate product labels.

DIRECTIONS FOR USE

Agricultural Use. Because most of the proposed uses of MON 78270 Herbicide are within the scope of WPA, an Agricultural Use box is included. A Non-Agricultural Use box is also included because some of the uses fall outside the WPS scope. Based on the policy described in 60 FR 21965 and in Pesticide Regulation Notice 95-3, this product requires a 4-hour Reentry Interval (REI) because it contains only glyphosate active ingredient and the acute toxicity qualifies for a CAUTION signal word. The Ag Use box includes that requirement, along with the appropriate reentry PPE, including the new glove statement discussed above.

Storage and Disposal. It is intended that MON 78270 Herbicide will be distributed in various plastic jugs or drums, both refillable and non-refillable, as well as in bulk trucks, bulk tanks, and large refillable shuttle mini-bulk drums. Appropriate language for these various container types is included in the proposed primary labeling, and will be relocated to the appropriate container label for manufacturing. This label text is based on the already approved directions in other related glyphosate herbicides and in the Label Review Manual, Chapter 13.

General Information. The information in this section, Parts I and III, is that found on the Roundup Ultra Herbicide and Roundup Pro labels.

1-410-0187

Mixing and Spraying instructions.

The proposed text is adapted from Roundup Ultra and Roundup Pro Herbicides, incorporating the recently adopted language from the Spray Drift Task Force, which the Agency has recommended for inclusion in other glyphosate-based agricultural herbicides. Some of the precautionary information for use of selective equipment (hooded sprayers and wipers) has been expanded and modified to provide growers the best up-to-date information to avoid crop damage.

Use Rates:

MON 78270 Herbicide is similar to Roundup Ultra, Roundup Pro, Roundup UltraMAX, and Roundup Pro Concentrate Herbicides, except that it has a higher concentration of glyphosate in the form of its potassium salt. The maximum allowed volume-based application rates throughout the proposed label have been reduced from those of the traditional 3 lb glyphosate acid equivalent per gallon product line according to the amount of glyphosate acid active ingredient loading in MON 78270 Herbicide (4.5 lb per gallon). The maximum rates proposed are therefore targeted to be 66% of those approved for Roundup Ultra and Roundup Pro Herbicides [$356 \text{ g/L} + 540 \text{ g/L} = 0.659$] on a volume basis. The maximum annual application rates (Part I, Sections 5; Part III, Section 5) for crop and non-crop situations have been reduced to 5.3 quarts per acre and 7.0 quarts per acre, respectively. The maximum percentage concentration for hand-held sprayers (Part I, Section 6.3 Table; Part III Section 6.3 Table) has been reduced to 7%. The maximum single treatment rates recommended in the Weed Rate Tables (Part I, Sections 13, 14, and 15) have been reduced to 3.3 quarts per acre. Similarly, the stated maxima at various other points in the label, particularly in the Roundup Ready® Section and in the preharvest crop treatments have all been converted using the 0.66 multiplier.

Use Sites: Use sites are within the set of uses approved for Roundup Ultra Herbicide, Roundup UltraMAX Herbicide, and Roundup Pro Herbicide (524-475) as mentioned above.

Limit of Warranty and Liability. Monsanto indicates herein a preference, but not an enforceable requirement, that this product be used for reformulation or repackaging only with Monsanto's permission, and further indicates that uses outside this preference will not be warranted.

Supplemental Labels. Supplemental labels are included in Parts II and IV of the Master label. Primarily these are instructions that are geographically limited or which are for very specialized uses such as seed production of new glyphosate-tolerant varieties that very few customers would need. Specifically, aerial labels for application in California, Fresno County, and Arkansas are included there and referenced in the main label. The text is identical to that presently approved for Roundup Ultra Herbicide, except that the use rates are scaled using the 0.66 factor as above.

Section D
Residue Removal Procedures

178010187

567

Residue Removal Procedures

The proposed uses of MON 78270 Herbicide are not expected to lead to crop residues above established food tolerances, so no residue removal procedures are needed.

179070187

Section E
Effectiveness Data

1800:02.87

Effectiveness Data

Monsanto requests that the Administrator waive the requirement of efficacy data under provision 3(c)(5) of FIFRA as amended.

181070187

Section F
Tolerances

1820F01.87

Tolerances

The present residue definition in 40 CFR 180.364 (a) should be amended to include potassium as an allowed form of glyphosate for application to food crops. Pesticide Petition **1F6295** was filed in March, 2001, proposing that change. That petition should be granted in order to approve this registration application for MON 78270 herbicide.

The use instructions proposed for MON 78270 herbicide involve treatment of food and feed crops at rates and timings that are equivalent to the use rates for other glyphosate herbicides comprised of isopropylamine, ethanolamine, and ammonium salts of glyphosate, as well as products including glyphosate in its acid form. It is believed that the water solutions of glyphosate and surfactant that are sprayed for weed control are essentially the same, regardless of the accompanying positive ion. Once in or on the plant, the two ions are completely dissociated and will behave independently, so that the ultimate food residues, if any, are independent of the salt form applied. For that reason, the existing food tolerances, based primarily on studies conducted with the isopropylamine salt of glyphosate, are numerically sufficient to cover the proposed uses of MON 78270 herbicide, once the residue definition is revised.

Section G
Reasonable Grounds

1840-0187

Reasonable Grounds to Support of the Registration of MON 78270 Herbicide

Monsanto herein is applying for registration of an end-use herbicide product MON 78270 Herbicide. The active ingredient in this product will be glyphosate in the form of its potassium salt. MON 78270 herbicide will use the manufacturing-use product MON 78623 58% Technical Solution (EPA File Symbol 524-LGE) as a source for the active ingredient. A registration application for MON 78623 58% Technical Solution was filed dated 28-Mar-2001, along with Pesticide petition 1F6295 proposing to include potassium as an allowed for of glyphosate for food uses. The registration of MON 78623 58% Technical Solution and the granting of Pesticide Petition 1F6295 are needed to support the present application.

MON 78270 herbicide has significant benefits for growers, distributors, and the environment compared to other glyphosate herbicides. Primarily, these are storage, pumping, compatibility, and handling characteristics of the concentrated product that facilitates its safe and effective use by distributors, retailers and growers. These benefits are discussed in more detail below.

With regard to agronomic performance, preliminary greenhouse and field testing has shown that MON 78270 herbicide, based on potassium glyphosate, offers weed control and crop safety that is not different from Roundup Ultra or Roundup UltraMAX commercial herbicides in side-by-side trials. In the 2001 summer season, additional work has been undertaken to reinforce this preliminary conclusion. However, based on the initial findings, we propose herein that labeling for MON 78270 will be the same as those for existing products when compared on an equivalent glyphosate acid basis.

Benefits of potassium-glyphosate based herbicides

- Convenience to growers of a more concentrated product – MON 78270 herbicide contains 50% more glyphosate acid per gallon than Roundup Ultra herbicide.

- Environmental benefit realized by employing the potassium salt of glyphosate in place of organic amines – potassium is an abundant natural element in surface soils and sediments, minimizing the need to produce and apply synthetic counterions.
- Because MON 78270 is more concentrated, fewer containers, trucks, train cars, and storage facilities are required to transport a given amount of weed control to the use sites.
- MON 78270 Herbicide has low viscosity compared to isopropylamine- or ethanolamine-based products, and therefore it can be pumped more rapidly in bulk systems. This is a benefit to dealers and growers handling large volumes of product.
- MON 78270 Herbicide does not crystallize or thicken unacceptably at low temperatures, and therefore dealers or users do not have to be concerned about these matters which can sometimes occur with concentrated products based on organic amines.
- Because it does not use a flammable organic amine counterion, there is less fire risk during manufacture.
- Potassium hydroxide is an extremely widely used industrial chemical that is available from many sources, so that it does not require any special manufacturing capacity to support the production of organic amines for the glyphosate herbicide business.

